

# *African Violet*

JUNE

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## A LETTER FROM THE EDITOR

Dear Members:

My sincere apologies to Evelyn Doell who wrote the nice story "Our Bashful Beauties" and to Lauretta L. Littig who will conduct the "Question Box". I misnamed them both in Volume 3, No. 3, and I felt very badly when I discovered my error!

Was nice seeing so many of you at Philadelphia.

Most sincerely,

*Alma Wright*

## A NEW AFRICAN VIOLET FOLDER

Now Available

Michigan State College has recently published an attractive 8 page folder on African Violets. It is printed in violet and yellow. Its purpose cultural information to the beginner. Following its title it simply states it was written by staff members of the Department of Horticulture. Its author is Mr. Evan Roberts and it was edited by Mr. Robert Lorce, both of the Department.

Free copies are obtainable by writing to the Bulletin Office, Michigan State College, E. Lansing, Michigan for Extension folder 147, African Violets.

— Editor

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# African Violet Magazine

*A Quarterly Publication*

## C O N T E N T S

VOL. 3. NO. 4

JUNE 1950

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Photograph by Robin.

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# The Presidents Message

## Thanks to our Loyal Workers



Our many thanks to Esther Schadewald and her corps of fine helpers for the wonderful convention in Philadelphia. Those of us who were fortunate enough to be there to enjoy their whole hearted hospitality and the fine programs will never forget it.

I certainly enjoyed seeing so many of my fellow members there - would have loved to have visited and had a chat with each and every one, but that was physically impossible.

I am sorry so many of you had to miss this fine meeting and hope that you can make it next year.

Many thanks too, from all 4500 of us, to our marvelous magazine staff under the splendid leadership of our editor Alma Wright. This staff has an overwhelming job. They work and work and work. The results are most pleasing. Our magazine is magnificent. These people who give so unstintingly of their time and energies do so without any financial compensation, as do all your officers and committee chairmen. However, there is a great deal of satisfaction in a job well done and the finished Magazine must be very gratifying to those who work on it.

We have a message from another of your hard working committee chairmen, Mr. Boyce Edens, Chairman of the Registration Committee. Mr. Edens says, "I believe practically everyone is somewhat weary of the use of the words in names of African violets such as; double, improved, supreme, spooned, blush, amazon, blue, pink, white, lavender, purple, etc."

"I will always remember how much I was impressed with the All-American Rose PEACE, when I first saw it in a flower show at Asheville, North Carolina. The one word that composed its name PEACE was not at all descriptive of either the color or the form of this magnificent new rose; but it seemed to completely describe the full richness of the flower to which it was given as a name. It was really an appropriate name."

"Let us, too, begin to apply similar appropriate names under which the exquisite new African violets of tomorrow will be known and registered permanently with the Society. Names that will reflect the wonderful quality of bloom, foliage and form; names of a single word - in the interest of simplicity and euphony - such as Alight, Aglowing, Antique, Amity, Aristocrat, Bountiful, Bequest, Cheerfulness, Cheerio, Cherie, Crusader, Chosen, Captivation, Diadem, Display, Delight, Exclusive, Eclipse, Enchantment, Frills, Garland, Glorious, Gallantry, Heritage and so on through the entire alphabet of really appropriate names for African violets."

Our newest Committee on Show Staging and Judging, under the chairmanship of Mrs. James Carey, gave a very good account of itself at Philadelphia. You will be hearing more of them.

We are trying hard to give you the information and help that you want.

Sincerely yours,

*Myrtle Radtke*

# SAINTPAULIA TONGWENSIS

Harvey Cox, Calif. and Evan Roberts, Mich.

*Saintpaulia tongwensis* was discovered growing on Mt. Tongwe in North East Tanganyika Territory, East Africa within the last decade. In order to reach Mt. Tongwe it was necessary to travel through a long stretch of grass over 5 feet high. This belt of grass has effectively prevented any outward distribution of the seed of *Saintpaulia tongwensis*. It has also excluded the incursion of seeds of any other species of the genus. In addition it is restricted to a ledge of hard rock 50 yards long on the ridge of the mountain at 2,300 feet. It was first discovered there by Mr. H. P. Herring growing in humus on gneiss rocks beneath a light shade of undergrowth.

Its cultural conditions are much the same as for the other species but it flowers better at temperatures of 80-90 degrees F. although they flower well at 65-75°F.

There is a broad pale green band along the center of each leaf parallel to the mid-vein which shows up plainly in artificial light, but is not so noticeable in day-light. The flowers are pale violet blue. They are lighter in color than the variety Blue Eyes and approach the lightness of the variety Tinted Lady. The

S. TONGWENSIS

flowers are 1 1/8 inches across. It is a plant that grows to a single crown and very seldom suckers. It has a pleasing habit of growth with plenty of space between leaf stems which allows light for bud initiation and development and it flowers freely. Four to five flowers are produced on each of its main flower stems. The leaf blade is narrow and has slightly toothed edges. The leaf texture is fleshy and has a clear or transparent appearance. Young leaf stems show a red coloring.

Its leaf blades are egg shaped in outline. The base of the leaf blade is heart shaped and slightly unequally sided. In mature cultivated plants the blade is 2 inches wide and 3 1/4 inches long. The botanical term for the toothed margins is "crenulate". The older leaves have short multicellular hairs. The leaf stems or petioles are up to 3 1/2 inches long and have spreading hairs. The fruits are called "capsules". They are cylindrical and are 1/2-3/4 of an inch in length.

*Saintpaulia tongwensis* was first described by B. L. Burtt in 1947.

The species to be described in the next issue will be *Saintpaulia diplotricha*.

Photograph by Brian Perkins





SAINTPAULIA MAGUNGENSIS E. P. ROBERTS

Photograph by E. N. Huby

## A NEW SPECIES OF SAINTPAULIA

Evan Paul Roberts, Department Of  
Horticulture, Michigan State College,  
East Lansing, Michigan

The genus *Saintpaulia* Wendl. is steadily increasing in size as more species are being discovered and described. This is due in part to the mounting popularity of the beautiful species and varieties. The wild relatives of *Saintpaulia ionantha* Wendl. are equally attractive and certainly offer a great wealth of plant material from which to produce improved hybrids, although the species possess admirable characteristics by themselves.

With appreciation to Mrs. Robert Wright, Editor of The African Violet Magazine for the splendid cooperation she has given and to Mr. Charles Gilly, Taxonomist, Michigan State College for his generous assistance with the technical description necessary for the publication of a new species, and to all persons aiding in the importation of this recent species, the author deems it an honor to be able to describe a new species of the genus *Saintpaulia* as follows:

*Saintpaulia magungensis* E. P. Roberts, *sp. nov.*—Herba basi ramosa, ramis procumbentibus, demum adscendentibus, cum foliis pedunculis et sepalis pubescentia pilis brevis et pilis longis intermixtis; foliis remotiusculis subcarnosis cum lamina crenata orbicularis vel suborbicularis, ad basim cordata vel subcordata et ad apicem obtusa, subtus albo-viridis; pedunculis tenuibus folia superantibus 2- vel 4-floris supra medium bibracteolatis, bracteolis linearis acutis; sepalis lanceolatis, corollae tubum brevem paullo superantibus; corollae lobis densiuscule eglanduloso-ciliatis, posticis ovalis quam lobi laterales late ovalis 1½-plo brevioribus, lobo antico late ovalo quam lateralia subaequale; staminum 2 filamentis exsertis, antheris deltoideocordiformibus; staminodiis 3 minimis papilliformibus; ovario basi disco rubro annuliformi instructo, conoideo in stilum 3—4-plo longiorem attenuato; stigmate subgloboso, non bilobo.



Stems procumbent, branched, rooting where they come in contact with soil, pale greenish when young and developing a brownish corky outer layer when older, 6—14 cm. long, 3—7 mm. in diameter, with internodes 3—30 mm. long. Vegetative parts of the plant covered with silky pubescence of long and short hairs intermixed, the short hairs appressed, the long ones spreading and 5—8 times longer than the short ones. Leaves medium green above, pale greenish-white below, orbicular or very nearly so, 3—7 cm. long and 3—6 cm. wide, apices obtuse, bases cordate to subcordate, margins crenate and slightly revolute; midrib prominent, impressed above, paler green than the upper leaf surface; primary veins generally 4 on either side of the midrib, impressed above, prominent below. Petioles 3—10 cm. long, 2—4 mm. in diameter, nearly terete; inflorescences 2—4-flowered, the peduncles 4—5 cm. long, arising from the upper leaf axils and exceeding the subtending leaves, bibracteolate; bractlets linear, acute, 2—2.5 mm. long and nearly 0.5 mm. wide; pedicels 1.5—1.8 cm. long, erect at anthesis, usually reflexed following flowering. Flowers nearly 2 cm. broad when fully opened; sepals 5, brownish-purple, about 4 mm. long. Corolla violet-blue, the central portion darker, 5-lobed, the outer surface sparsely pubescent and the margins of the lobes densely and minutely ciliate with eglandular hairs; upper two lobes oval, 7—8 mm. long and 6 mm. wide, the inner margins overlapping about 2 mm.; lateral lobes broadly oval, 10—11 mm. long and 8—9 mm. wide; lower lobe broadly oval, 11—13 mm. long and 9—10 mm. wide. Stamens two, inserted at mouth of corolla tube on either side of the lower lobe; filaments nearly 4 mm. long; anthers connivent, deltoid-cordate, bright yellow, about 2 mm. long and 3 mm. broad at the base, the sacs divergent and dehiscent by short basal slits. Staminodes three, papilliform, inserted on tube, rarely more than 0.25 mm. long. Ovary surrounded at base by narrow reddish nectary disk, at anthesis 1.5 mm. long, ovoid-conical, pale green, gradually tapering into the slender pale violet-blue style 5—7 mm. long; stigma obscurely subglobose, not at all 2-lobed. Immature capsules lanceolate-cylindroid, to at least 16 mm. long.

Type specimen: *E. P. Roberts* 1 (deposited in the herbarium of Michigan State College), from a plant grown from material collected at Magunga in the foot-hills of the Usambara Mountains, Tanganyika Territory, East Africa.

*Saintpaulia magungensis* appears to be most closely related to *S. grotei* Engl., also from the Usambara Mountains, from which species it differs in having much smaller leaves, shorter petioles, crenate rather than dentate-crenate leaf margin, non-glandular hairs on margin of corolla, unlobed stigma, and smaller, darker colored flowers. From *S. goetzeana* Engl., another procumbent species from the Uluguru Mountains, *S. magungensis* differs in having crenate rather than entire leaf margins, greenish-white under leaf-surface, non-glandular hairs on margin of the corolla, overlapping upper corolla lobes, unlobed stigma, and darker flower color. All three of these procumbent species, like *S. diplotrieha* B. L. Burtt, have a pubescence composed of hairs of two different lengths intermixed.

*S. magungensis* with its creeping, branching stems and its beautiful leaves cupping downward is indeed a valuable addition to the genus. It has an artistic habit of growing over the sides of its container completely hiding the harsh lines of the rim of the flower pot as in the photograph.

Possible future hybrids of it will undoubtedly have other colors than its attractive Violet No. 4 (New England Gladiolus Chart) and dark center of V. No. 2. One of its hybrids has already developed into one of the most erect African Violet plants in existence in spite of the fact that *S. magungensis* is a creeping type of African Violet with branching stems. The possibilities are numerous.

A planting of sisal now covers the area where *Saintpaulia magungensis* E. P. Roberts was discovered. It is doubtful if plants of it now exist in their native location. It is quite probable that this species will have to be sent back to East Africa to save it from local extinction.

## ANOTHER DOUBLE TROUBLE CURE

Martha Mears, Indiana

My double violets when first purchased had nice open blossoms on them but after a while the plants were loaded with little hard balls where blossoms should have been. Now this was very unsightly and rather discouraging, so I tried to find the trouble, asking here and there with little results.

One day I was talking to a well known commercial grower, and I asked him what was wrong. He said, "You have to keep pushing them all the time". In growers'

language that meant feed and feed with no rest. I have been trying this method and it seems to be working very well.

I give the same amount of food that I do to my singles, but twice as often. With some of the plants, I have placed a small amount of fertilizer in the saucer and water in it; the plants get a small amount of food each time they are watered. My Duehess is full of open blossoms now and the Fischer doubles are looking good also.



## BABY GREENHOUSES

Florence T. Foltz, Pa.

Several months ago, I received a leaf through the mail from a friend. It was a new variety, and actually no bigger than the proverbial dime, but was well rooted. But, and this is the sad part, it was "decapitated". The petiole was broken off right at the base of the leaf. I felt that a leaf so tiny would either get lost, or die from too much moisture in my BIG--14"x24" --greenhouse, so I manufactured my first miniature individual greenhouse. I took a glass coaster and put about a tablespoon of vermiculite in a mound in the center of it, thoroughly moistened it with Hyponex and prayerfully planted my tiny leaf. A small glass custard cup which fits inside the coaster completed the greenhouse. In about a month a baby appeared, and when he was less than one-half inch high, he and his little mother were transferred to a 2" plastic pot. This was topped with a glass baby-food jar, and thus my second type of individual greenhouse came about.

The second type has saved babies whose mothers have died, and is now being used for seedlings. It would not be very practical for anyone with a large number of seedlings, but it is fun experimenting with a few.

There are probably very few African violet enthusiasts who have not used every available covered refrigerator dish or

casserole, but for a single leaf I heartily recommend my "Custard cup and Coaster" greenhouse.

One statement I shall never forget was made by one of our grand old doctors after our class of nurses was "Capped". He said, "Girls, you know more now than you will ever know again in your lives. All the treatments and procedures you have learned you will soon use so routinely that you will just take them for granted. As the months go by and you begin to realize how very much we DON'T know about medical science, you will look back to this day and see that I was right." The past 19 years have mellowed those words and I have learned that they fit more than the nursing profession. Even in our African violet hobby we can apply them.

Many times we use terms that are everyday expressions in violet language, but they are pure Greek to the novice. Same goes for potting, so I decided to pass along a few things I have learned.

In all my African violet experience, the only statement that growers seem to agree on is the temperature of the water used in watering plants. All other procedures, such as pots, soil, exposure etc., will cause much discussion and be questioned one way or another. So right here I'll say, "If you have a good method for raising African violets, stick to it".



For potting baby plants, I like small pots. As we all know, one baby may have an extensive root system, and another may have a very small one. The latter is put into the smallest pot I have, plastic jigger glasses which were converted into flower pots by son, Jimmy. He used an awl, heated over a candle flame to make a hole in the bottom of each pot. After putting drainage in the bottom of the pots, (I use crushed limestone), I add one-third to one-half pot of baby soil, which is made of one-third each of peat, vermiculite, and regular potting mixture. If the roots are small I plant them in vermiculite or sand, then as they grow down, they grow into the soil. If a transplanted baby is wobbly, instead of propping it with toothpicks or hairpins, I put either a mound of coarse sand, or some crushed limestone around the base of the plant. Limestone works very well for larger plants, too.

I have used "Ferto-pots" for African violets with complete success. The #2 size fits a two inch pot, and the #3 fits a 3 or 3½ inch pot. In most cases the Ferto-pot pushes right out of the pot for shifting plants. Some folks think these pots cause black flies, but I have used them by the hundreds and have no flies.

The actual process of potting often seems a task for the beginner, but it really

isn't hard when you know how. In my left hand I hold the plant between my index and middle fingers, and hold the pot with my thumb and other two fingers. With my right hand I add the soil. Tap the pot on the table enough to firm the soil well around the roots, and thus fill up the air pockets.

When potting instructions say, "Do not overpot", do you know what it means? I have always shown at least average intelligence, but for some reason I interpreted it as meaning "Don't pot too often". Size of pot never entered my mind. So, when I would buy a new plant in a 2" pot, I'd plunk it in the biggest pot I could find, - usually a 6 or 8 inch size --and then wonder why it wouldn't grow. I don't really know how or when it sunk in that it meant the size and not the number of times it was moved. I doubt if there are any who need this advice, but just in case I do have "company", it simply means to use a pot suitable to the size of the plant; in most cases the next larger size is sufficient.

If any of these things I have learned through bitter experience will help another African violet lover, perhaps I may have added my small bit to the furtherance of our beloved plant.

## DRESSING UP CLAY POTS

Pauline Wyland, Pa.

We all know that clay pots are the best for African violets as they let the roots "breathe" better than do glazed pots, tho' some would not agree with me. I have used both. The clay pots are cheaper, especially if you have a very large collection.

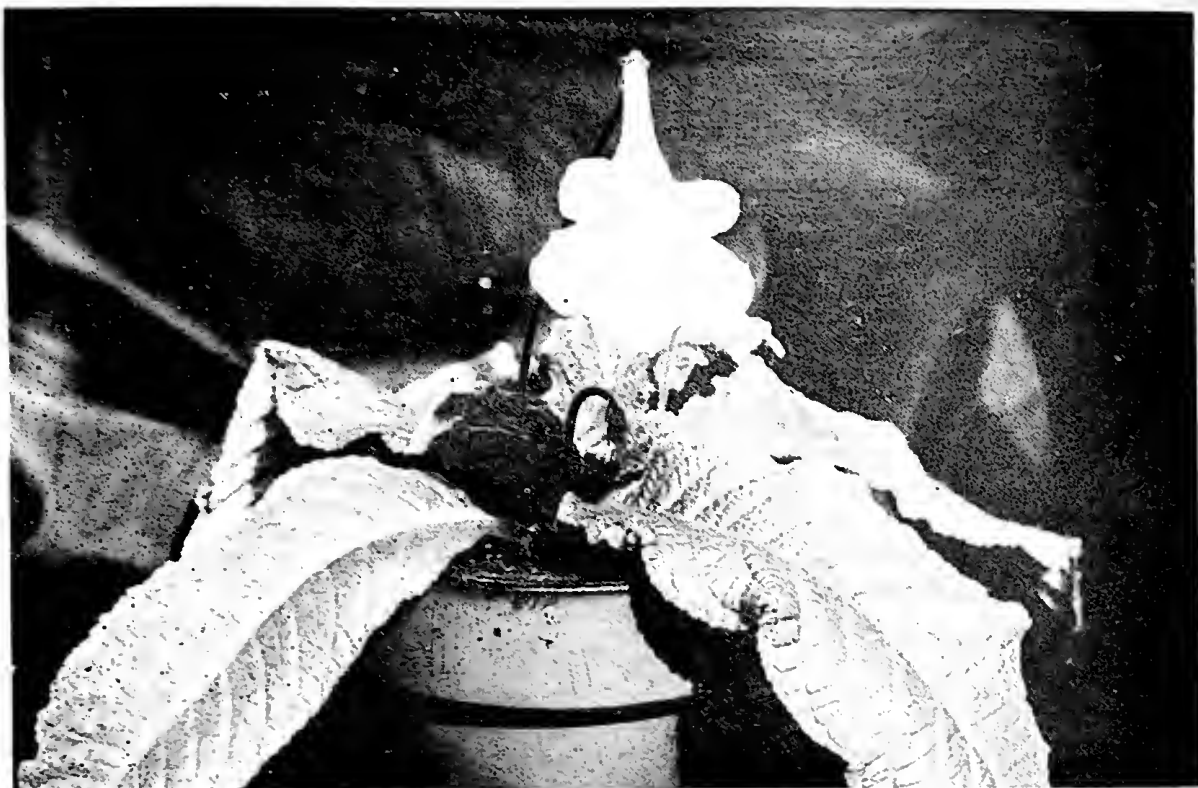
I don't like the appearance of the common clay pot, so I tried to dress it up a little. I tried enamel first, but that peeled off. Then I tried a flat coat of paint on first, and the different colors of enamel on top of that, but in time, that would peel. One member said to try using linseed oil on the pot first. But then, I remembered using aluminum paint on some flower-pots a long time ago, and thought I would try it again.

So I got some aluminum paint and some gold paint from a 5 & 10¢ store. You need to use only one coat to cover. This paint does not close the pores of the clay pot like the enamel. It also keeps mold or moss from collecting on the pots, and the soil does not dry out so fast. This

paint is already mixed, and I don't think it has as much banana oil in it as the ones you have to mix yourself. This 5 & 10¢ paint does not harm the violets, either. I have been using it now for about 4 or 5 months. The flower pot should be dry to put the paint on. I like the gold color best, as it brings out the color of the leaf and flower better than the aluminum.

If any one wants to have different colors and can get powders from pottery places where they make colored pottery, it can be mixed with aluminum paint to get the color desired.

The flower-pot may be painted with the plant in it, but one must be careful not to get the paint on the leaves. I fold paper towels or napkins and put between the leaves and the pot, as this keeps the leaves away from the fresh paint until it dries, which is only a few hours if the temperature of the room is warm and dry.



From The Collection of Mrs. A. H. Farnham

Photo by Robin

## STREPTOCARPUS

(Greek meaning "twisted fruit")

Louise F. Smouse, S. C.

Commonly known as Cape-primrose, *Streptocarpus* is a stemless herb native to South Africa and Madagascar. Like its cousin, the African violet, it thrives in the greenhouse with easy cultivation, or in the choicer spots of one's home.

Seeds sown in February or March, treated as violet seedlings, should produce by autumn or winter. The plants can be propagated also by leaf-cutting or division. However, this *Streptocarpus* does not live on and on as our *Saintpaulia*, but rather tends to be an annual; its life cycle is completed within a year.

Hortus by Bailey lists four varieties described as follows:

*S. Rexii*, of several leaves to eight inches long, with blue or mauve flowers, trumpet-like to 1½ inches long on scapes to one foot high.

*S. Dunnii*, of solitary leaf to three feet long, with flowers of rose to reddish, 1½-inches long, also on scapes to one foot.

*S. Kewensis*, a hybrid of *Rexii* and *Dunnii*, with the characteristic green leaves, with compact mass of flower stems with six or eight to the stalk; the blossom is bright mauve-purple with throat striped with dark brown-purple.

*S. Wendlandii*, with solitary leaves two feet long, purple beneath; the flowers of violet-blue one inch long and 1½ inches across, on scapes 2½ feet high.

# MY SKYSCRAPER VIOLETS

Daisy Jones, Tenn.

The term "skyscraper violets" does not mean they are tall, but I call them "skyscrapers" because my African Violets are cultivated and grown in reputedly the tallest commercial office building South of St. Louis! . . . the 29 story Sterik Building in Memphis, Tennessee. My African Violets seem to grow and thrive very well, indeed, on the 13th floor of this office building.

I have combined my African Violet hobby and office work together for the past ten years and neither conflicts with the other. In fact, the two seem to go hand in hand very nicely,—having over two thousand hearing aid customers coming into the office, each one admiring my gorgeous violets, asking me questions as to my unusual success with them. You would be surprised at the number of men who admire them just as much as their wives. And, why not? Don't we all love flowers?

Having six large windows facing North, I have chromium stands with thick glass shelves to hold the violets. They never get

any direct sun but do get a strong indirect light and over-head room electric lighting. On rainy, dark days (yes, we do have such days in the Sunny South once in a long while), I use a large sunlight bulb indirectly on them, never using it more than 30 minutes at a time. The above helps me to groom my plants, keep them in top notch condition, with beautiful glossy clean foliage, large blossoms and long blooming periods. It seems to take so little of my time to attend my plants each morning—I check up on them immediately upon entering the office—snipping off the seed pods after the bloom has dropped. Having steam heat, I never have to worry about them even on the coldest nights, since the building maintains plenty of heat at all times.

Then, when our annual Spring African Violet Show comes along . . . oh, there is nothing finer, believe me, than to come away with some blue ribbon winners. I proudly display the ribbons by the side of my plants, and it makes me very proud of MY SKYSCRAPER VIOLETS.



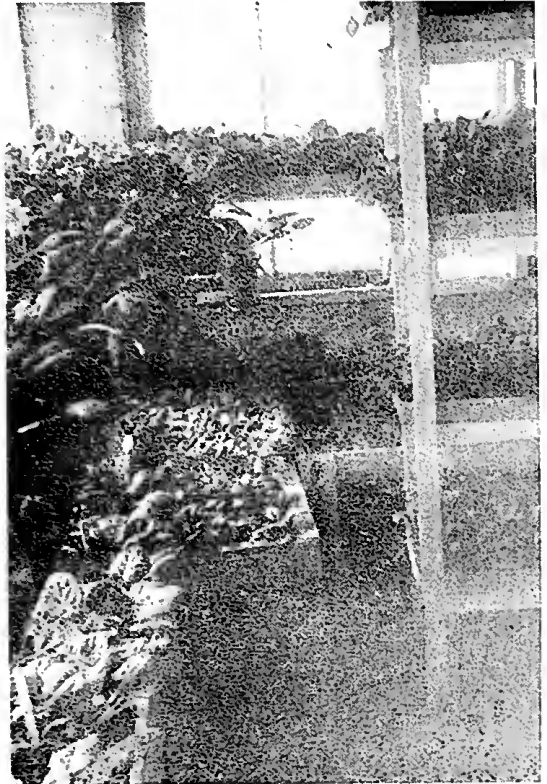
African Violet  
is the ideal  
plant for  
the office  
gardener.

# GROWING VIOLETS IN TULSA

Leona McDowell, Okla.

I live on a standard city lot in Tulsa. There are four huge elm trees and one maple tree growing around the edge of it, and the soil is very poor. I know from experience that it will not grow violets in pots or any other pot flower. Out of desperation I started a leaf pile. Last year I had one about four feet square and three feet high. I built it in layers of six inches of leaves and a scant sprinkling of Adco (about one-fourth as much as directions called for) as I wanted to have as near pure leafmold humus as possible. Also I added to the entire pile three or four shovels of well rotted cow manure. This pile was turned once in the early spring and it stayed piled up until June, when I screened it through half inch hardware cloth. Quite a few tiny twigs and bits of leaves came through, making it very light and porous. The year before I had added too much fertilizer to my leaves and the root development wasn't what it should be. So this year I only added a very small amount of fertilizer and Adco, as I wanted an all around potting soil that would grow leaf cuttings, seedlings and large plants.

To five gallons of this leaf mold, I added one gallon of sand and one gallon of water. This was baked in the oven for one hour at 300°. I first tried 200°, but found earthworms in the soil later, and I was afraid if they survived, possibly



Inside view of basement porch

nematodes did too. This higher degree of heat does not seem to injure the potency of the soil. After baking, I emptied this into a large wooden box and added a gallon of vermiculite and a quart of finely ground charcoal. As soon as this soil cools it is ready for use.

This soil has never been analyzed but I believe the results will prove it is adequate for the growth of African violets. During the past year I have grown or started 5,000 African violet plants from leaves and have several thousand seedlings growing in all stages from barely sprouted seeds to plants just bursting into bloom. They are sturdy, strong plants, with bright glossy leaves that fairly shout their good health and happiness and bloom profusely at an early age and stand up well under home conditions.

For rooting leaves, I use this soil mixture with the same measure of vermiculite - one cup of soil to one of vermiculite. The plants sprout readily and grow into full vigorous plants in 2¼ inch pots. I leave them in these pots until they start bud-



View of two porches



Mrs. McDowell

ding, then separate and put them in three inch pots and they start blooming immediately. I have some plants blooming now that have only had about three feedings of Hyponex.

For sprouting seedlings, I use this soil in small pots with one-fourth inch of crumbled vermiculite on top. The seedlings are fed enough to keep them growing vigorously with the water that seeps up through this soil. When they are transferred to individual pots with this soil in them, they receive no shock or setback, as they are already adjusted to it.

This soil is used for growing large plants and seems to have adequate food value with a feeding of Hyponex about every three weeks to keep them growing and blooming almost the year round.

We who live in the Southwest, have quite a problem before us. We are at least five years behind the North and East in growing violets. One of the reasons is our soil. It is very poor in humus as one summer of drouth and intense heat burns all this out of the soil. I have talked with many people who have moved here from the North and East and one remark they invariably make is that they used to grow beautiful violets and all they did was get the soil out of their yard and put it in the flower pot. Since they have moved here, they have not been able to grow violets.

Another drawback to violets here is our lack of humidity in the air, and hot, dry winds that burn and dry out everything they blow on. The best way I have found to overcome this condition is to keep the windows to the violet room closed during the summer, opening them only enough for proper ventilation, and to keep the pots sitting on pans of damp sand. Using this method, I was able to keep my violets blooming happily all during our hot, dry summer.

## SOWING AFRICAN VIOLET SEED IN JARS

Harvey Cox, Calif.

One of the best methods of getting new varieties is by cross pollination. Pollination is the transfer of pollen from the anthers to the stigma of a flower. If the transfer is from the anthers to the stigma of a flower of the same variety, it is self-pollination. If transferred to the stigma of a flower of another variety, it is cross-pollination. After the transfer is made, it takes the seed about 8 months to ripen. Then it is ready to be sown.

To start plants from seeds use a pint-size, square, wide-mouth fruit jar. The first thing to do is to lay the glass jar on its side and place 1/4 inch layer of large size vermiculite in it. Then put in a half inch layer of a mixture of 2/3 leaf-mold and 1/3 fine vermiculite. The leaf-mold mixture should be dampened until moist, but not soggy before it is placed into the container. On top of this place a very thin layer of shredded sphagnum moss. All materials are placed in the jar with a spoon and may be leveled with a pot marker. The moss layer should be moistened with a fine spray such as an atomizer to make it damp. A cardboard trough is made by folding a piece of cardboard. Place the seed on the cardboard and roll the seeds down the fold by gently tapping. They should be spread evenly over the seed-bed. Do not cover the seed.

The lid is then screwed on loosely. If the moss and leaf-mold mixture start to dry out it should be watered by dropping water down each side (not over the seed) of the jar with a dropper. The jar should be put in a warm (75-85 degrees F.) shady location and in about 2 weeks the tiny seed-leaves will appear above the sphagnum moss. Moisture will sometimes condense and gather on the small leaves of the seedlings but they seem to enjoy the high humidity in the jar.

The seedlings may be removed by slipping a knife under the seed medium and removing the plants from the jar. They may be transplanted when they are an inch high. Insert them in a flat or shallow bulb pan, carefully planting them about 1 1/4 inches apart. Cover the seedlings with a pane of glass until they have become established. Just before they start crowding each other they may be potted in the usual manner. This method works well with seeds of other members of the Gesneria family as well as for Saintpaulias.



# NEMATODES AND PARATHION

NEIL C. and MARY J. MILLER, N. J.

(Editor's note: It is unlikely that any article that has appeared in the African Violet Magazine has required greater effort or has been longer in preparation than this one. The information about nematode attack on saintpaulias has been difficult to acquire; some of it is available only by inference and analogy, hence the frequent references to field crops. The facts about parathion have been equally difficult to obtain, both as to effectiveness and toxicity, and have been exasperating to write. The article was originally written as instruction in the use of parathion, but had to be entirely re-drafted.

No matter how tempting the use of parathion may be, heed the author's advice: Don't use it. Not until it gets official release, if it ever does. The information about it is being published only in the hope that investigational work may be intensified thereby.

The second half of the article is written in the singular, although both authors participated in all phases of experimentation, plant treatment, and composition. The singular is used because "I" becomes rather impersonal and occasions less emphasis on the authors than is the case when personal references shift from one to the other. The first person is used because it is the normal practice when relating experiences in this Magazine.)

This is not the first article on nematodes that has appeared in the African Violet Magazine, and it won't be the last. Nematodes have to date managed to masquerade as practically every other saintpaulia ailment and so have largely escaped attention. There has been so little knowledge available on the kind of damage that nematodes wreak on African violets that people have not known in advance what to look for, and haven't known what they saw after they had seen it. Observation and reporting of nematode attack has practically always ascribed the damage to something else.

When preparation of this article was started last May (1949) it was hoped it could be a how-to-do-it article. But such it can not be, for reasons that will be explained later. All that can be done now is to point out, in more detail than has been available before, the way nematodes attack African violets; describe a small amount of work with a chemical which gives promise of having value in control of African violet difficulties caused by these pests, and to suggest other possible means of control.

Nematodes are tiny worms. Thousands of species, in hundreds of genera, are already known and more are being discovered every year. Most of the known forms are parasites of animals, others attack plants or live free in soil or

fresh marine waters. Many of them are harmless, some have a beneficial effect as scavengers. But at least several hundred species are animal or plant pests and cause a wide variety of diseases, from hook worm and elephantiasis in human beings, to trichinosis (round worm) in hogs, to so-called "root-rots" in African violets.

Some of the animal-inhabiting forms are relatively quite large and can readily be seen with the unaided eye. Most plant-inhabiting forms, however, are quite small, and can rarely be detected without the use of a magnifying lens.

Nematodes are wide-spread over practically the entire earth, being most numerous in the tropics. They are also prevalent throughout the temperate zones. Some have been found in both the North and South frigid zones, and a few have been observed even in the polar regions.

Nematodes, themselves, rarely kill a plant which they have attacked. Their effect is debilitating: they weaken the attacked plant to such an extent that the plant is worthless (as is frequently the case with African violets), or they interfere with its life processes so much that it easily succumbs to some other ailment or insect that would not of itself damage the plant to any extent.

In many respects there is a parallelism between nematode infected plants and the accepted symbol of shiftlessness in America, the hookworm-ridden "poor white trash" of the South. The "trash," weakened by the nematodes working within him, becomes listless, lazy, and shiftless; he loses both ability and desire to help or improve himself. He doesn't die from the hookworm itself, but he readily succumbs to diseases that don't affect other people in better economic circumstances living nearby. Likewise a nematode-infested violet loses vigor and strength, the foliage weakens and becomes listless, the blossoms decrease in size and brilliance, and the plant is readily invaded by insects or fungi it could otherwise resist.

Where destructive nematodes have become established and have multiplied they have frequently made it impossible to continue to grow crops that previously were successfully grown. The presence of the nematodes in such places has often been unsuspected, so the condition has been described as "the soil is sick of beets," or "the soil is tired of alfalfa," or "spinach won't grow any more." It seldom happens with any crop, whether it is lawn grass seed, potatoes, or saintpaulias, that nematode damage is recognized at all until after it has become serious.

The study of nematodes has lagged far behind the study of other agricultural pests. There are several reasons for this: the parasites are below ground and do not generally give any unmistakable indica-



Fig. 1. These plants, when uprooted after the picture was taken, were both found to be nematode attacked. Note, however, that there is nothing in their appearance to indicate any definite ailment. Their condition could have been ascribed to starvation, over-watering, drying out, wrong fertilization, over-exposure of a weak variety, poor soil, etc., etc., and doubtless many plants similarly infested have been so diagnosed. It is this lack of definite symptoms which has largely been responsible for nematodes not being recognized earlier as the wide-spread pests they are.

tions of their presence; they are so small they can rarely be seen with the naked eye—merely to look for them requires uprooting and destroying plants, and their study and identification are technically very difficult. But the chief reason for lagging knowledge is that they are in a non-assigned field of study, roughly on the borderline between entomology and plant pathology but belonging definitely to neither. Thus it is not unusual, even today, sixty years after nematodes were definitely recognized as serious agricultural pests, for state experiment stations not to have either a department of nematology or a nematologist.

All known species of nematodes have, of course, been given classification names. The important ones have also been given common names. Some of these common names have been given because of some characteristic of shape or habit of the nematode described. Thus there are the

pin nematodes, the kidney-shaped nematodes, the spiral nematodes, the ring nematodes, the golden nematodes, the lance nematodes, etc. Other common names have been given because of the kind of plant attacked. In this group there are: the wheat nematode, the rice nematode, the potato rot nematode, the strawberry nematode, the fern nematode, the sugar-beet nematode, and others.

But by far the most widespread and most generally destructive nematode is the root-knot nematode. It attacks a wide variety of field and greenhouse crops, including saint-paulia. It averages about 1/40th inch in length, but vary somewhat on either side. The larva and males are shaped much like an eel, hence the common name "eel worms." It was the first plant nematode discovered in this country and is probably the most widely distributed, so it has frequently been referred to as "the nematode," the existence of other types being ignored.

Nematologists were puzzled for many years by the apparent inconsistency of root-knot nematode action, in some localities it would attack crops that it did not affect in others, then it would reverse, etc. This was for a long time ascribed to the action of different strains of the same species, but finally the evidence became conclusive that instead of there being different strains of the same species there were actually several different species. Classification into different species was made only a few months ago. Of course, there has been no work to date on the action of different root-knot nematode species

on saintpaulia, so it will be necessary to continue to discuss them all together as "the root-knot nematode."

The root-knot nematode probably came originally from the tropics, but it has been in this country for well over a hundred years; plant diseases now known to have been caused by the root-knot nematode were described in Florida in 1805, although the nematode itself was not recognized as the definite cause until 1889. It is now established in practically every state.

As any understanding of the damage done by the root-knot nematode must begin with knowledge of the characteristics of the pest it will be well to follow it through one life cycle, starting with larvae newly hatched from the eggs. These larvae migrate through the soil until they find a rootlet. They pierce the tissue and enter it, migrating to the axial cylinder. There they remain sedentary, feed, and grow. After once finding a place in a root, that particular nematode does not move any farther. It spends the rest of its life in that one spot. The root-knot nematodes, like all other plant parasitic nematodes, are equipped with a tissue puncturing device called a stylet which roughly corresponds to the tongue in larger animals. They use the stylet to puncture the tissue at time of entry, and they also use it to inject a secretion from their salivary glands into the plant tissue. This secretion has a most remarkable and as yet totally unexplained action on the plant: it causes several plant cells (usually three to five for each nematode) to enlarge considerably and become giant or nectarial cells. These nectarial cells produce food which the nematodes draw from them. This food, as it is withdrawn from the plant, is in a form already assimilable by the nematodes. Digestion is not necessary, and the alimentary tract of the worms serves more as a food storage than as a food digesting area. Once in place in plant tissue, with the nectarial cells producing food for them, the larvae increase rapidly in size, becoming adults in three or four weeks. Development is most rapid in tropical or sub-tropical temperatures (which are what we actually give our violets) and becomes slower as the temperature is lower. As soon as they reach adult stage they start to lay eggs, producing 400 or more on the average. Hatching time for the eggs also varies, being quite rapid in warm soil, and much slower, possibly up to several months, in cooler soil. The newly hatched larvae either immediately create permanent homes for themselves in the same tissue in which they were hatched or migrate through the soil to some new tissue. In either case they induce nectarial (or "giant") cell formation and start the cycle all over again.

The life cycle described above is that of the female. There are males also. They go through an intermediate sausage shaped parasitic larval stage which the females do not, and from which they emerge full grown. They migrate very little. Ordinarily the males play no part in reproduction. This is one case where Kiplings' immortal words "The female of the species is more deadly than the male" have full application. The root-knot nematode females can take entire charge of the reproduction proce-

dure, no assistance from the males being necessary.

It should be noted that there has been no mention of cysts in the above life cycle. Contrary to opinion, the root-knot nematode does not go through a cyst stage. What some people have observed and thought were cysts were actually egg-bloated females. As mentioned above, the eggs are sometimes slow in hatching, particularly in cooler weather, and, so far as control is concerned, this is almost the same as producing cysts, but, in contradistinction to several other nematode forms (e. g., the golden nematode of potatoes), the root-knot nematode never goes through a true cyst stage.

While the larvae do migrate through soil they do not travel far, probably only a few inches or a foot or so at most. So far as potted saintpaulias are concerned, spread by migration from pot to pot is not too probable. (Although it may, and probably does, occur if the pots are set in moist trays, or in trays containing peatmoss, sand, or soil.) Nor is there any appreciable spread from leaf to leaf. Spread is almost entirely by some movement of the soil itself, such as re-potting, separating, filling up a pot, dumping infected soil into a potting mixture, splashing of soil by careless watering, etc.

It is popularly believed that northern states are free of root-knot nematodes because of the cold winter temperatures. This is not true, they have been found as far north as Wisconsin, and are serious pests in some parts of the far northwest. Four degrees below zero (-4 degree F.) has been mentioned as a temperature below which they can not survive. There is some question that this is true for all species. And, even if it is true, it is for actual exposure temperature, not air temperature. Soil temperature is higher progressively below the surface (as indicated by the fact that frost only goes down so far), so long periods of air temperature below -4 degree F. would be required to lower the soil temperature to that point throughout the entire depth of soil in which nematodes live.

The root-knot nematode derives its name from the knots it makes on roots of many plants. When a larva invades a rootlet and causes nectarial cell formation the plant tries to overcome the damage by expanding the root around it. In many kinds of plants the enlarged areas are almost spherical in shape and are easily recognized as definite knots on the roots. But in saintpaulias the knot formation is not so definite, some knots do occur, but the result of infection is more often a swelling to two or three diameters over a considerable length of the roots. Examination of the roots may reveal no knots at all, the expanded roots appearing normal to the untrained eye. No doubt there have been many cases where an observer failed to recognize nematode infection of saintpaulias because no definite knots were visible or could be felt with the fingers.

In crops in general, and in saintpaulias also, when a nematode settles in a root and causes knot formation, the portion of the root beyond the knot is "blinded" and dies.

The knot then appears to be on a root-tip and this condition has led to the occasionally-expressed belief that the damage the nematodes could do would have to be slight because only the root tips were affected. Actually, however, a large portion of the root, and its food gathering ability, has been lost. It is this loss of food gathering ability of the individual roots, multiplied by the number of roots attacked, that is the real damage done by nematodes. No matter how much fertilizer, or water, or light (or re-potting, or anxiety, or nursing) is given the plant it slowly starves. Transformation of normal cells into nectarial cells also interferes with normal life processes of the plant, and in some cases the material injected into the plants by the nematodes appears to act as a plant poison.

In saintpaulias an even more serious effect than root infection occurs. The nematodes are not satisfied with attacking the roots, they attack the stem (if a saintpaulia can be said to have a stem) right at the soil surface. Possibly the attack at this point may be serious enough to kill the plant, but, if it is not, the damage done to the plant tissues by the nematodes makes possible the entrance of other nematodes, various fungi, insects, and bacteria. These,

in whatever combination they may occur, destroy the stem of the plant, and the plant appears to have rotted off. It seems quite certain that many of the cases of "root-rot" discussed in the Pigeons and mentioned in this magazine have had their origin in root-knot nematode attack.

(The question arises, "Why do root-knot nematodes attack saintpaulias at the soil surface as well as in rootlets whereas in most plants they invade only the roots?" No answer is given here, and there may not be one. But might it not be due either to plasmolysis or osmotic rupture resulting from the heavy concentration of chemicals at the soil surface caused by feeding with inorganic fertilizers and watering from the bottom? Possibly the one phase of violet culture on which there is more general agreement than on any other, i. e., watering from the bottom, creates the conditions which allow one of the most serious pests to enter the plants at the spot where they do the most damage.)

On many field crops the root-knot nematode attacks germinating seeds and young seedlings more seriously than it does older plants, sometimes even causing their death. This seems to be true also of saintpaulias, and it is a possible explanation of the poor yield of seedlings so frequently reported. (Generally the grower has been so thrilled with getting any seedlings at all that she has overlooked the fact that her yield was poor.) Frequent instances have been reported of getting only 9 to 20 seedlings from a pod of seed. A pod contains a minimum of several hundred seeds, so the yield was extremely small. When an explanation has

Fig. 2. A root-knot nematode infested plant. Again, note the absence of any definite symptoms. The small sized blossom is a frequent characteristic of nematode attack, but is not an infallible indication. Suckering also frequently occurs, but likewise it is not unmistakable.





been sought it has generally been assumed to have been poor germination, improper fertilization, or wrong temperature and humidity. All of these things have their effect, as do also pre-emergence and post-emergence damping off, other fungi, etc., so the poor yields can not definitely be ascribed to nematodes, but at least they are a previously overlooked possible cause.

The root-knot nematode can, and does, enter tiny leaflets before they emerge from the soil. They form knots on the leaves which may persist through the entire life of those particular leaves. There seem to have been no studies made as to what happens to life cycles and reproductive activities of root-knot nematodes so located in saintpaulia leaves. The presence of these knots has given rise to the idea that they are caused by foliar nematodes. This is almost certainly not the case, the action of foliar nematodes is different, ordinarily it is not one of knot formation.

When saintpaulia leaves are planted in nematode infected soil the leaves are frequently attacked to such an extent that they will not root. The nematodes enter the leaf at the broken-off end of the petiole, and work upwards between layers of tissue. An attacked leaf may appear to have had the outer layer of the petiole stripped off and rolled back. The inner portion of the petiole, robbed of its natural protection, soon succumbs to fungi and bacteria; in other words, it rots. It is probable that the stripping action is not due to the nematode action alone, but is caused by the secondary attacks of other organisms. In either case the leaves do not root, and the puzzled grower decides her soil is too rich, or that she used the wrong fertilizer or added it too soon, or that the leaves her friend in the Pigeon sent her from out in Oregon "were just no good, they all rotted clear to the top of the ground."

Some saintpaulia plants, possibly even some varieties, resist nematode attack at the crowns better than others. They form enlarged, rough, and calloused stems, sometimes up to an inch or more in diameter, through which the plants somehow manage to keep the essential fluids moving. The life of the plant is thereby prolonged. But sooner or later some infection follows the nematodes and cuts the plant's life line either above or below the galled area (generally below), and the plant dies. The owner of the plant, probably having for a long time taken a great deal of secret pride in her beautiful plant that was throwing out buttressed roots "just like a big old tree," is thoroughly perplexed when she tries to break off a leaf one day and the whole plant lifts off in her hands.

The root-knot nematodes, because they are non-migratory in the adult stage, are classed as "sedentary." There are other sedentary forms, such as the sugar-beet nematode, the citrus nematodes, and the kidney-shaped nematodes. None of these have been known to date to attack saintpaulia.

There are also sedentary types which do retain some powers of locomotion. Among these are the ring and scale nematodes, the spiral nematodes, and the pin nematodes. Information has not been developed

as yet as to just how serious they are as plant pests, and no instances have been reported of their inhabiting saintpaulia.

There are also migratory nematodes, forms in which the adult stage is capable of movement and does migrate within the plant and from plant to plant. The best known example of this type is the meadow nematode. The meadow nematodes have been known in this country since 1889, but even yet have been incompletely studied. They migrate through the soil to plant roots, puncture, enter, and move within them, feeding on cell contents as they move. They do not induce production of nectarial cells as the root-knot nematodes do. They damage plant tissues directly, producing reddish or dark-brown necrotic areas. Other organisms of decay immediately follow, resulting in the death of the root at that point. Sometimes they attack plant stems as well as roots, and their point of attack of roots is frequently close to the stem. Some plants try to repair the damage by pushing out new roots above the damage points. These new roots are in turn attacked, and the process is repeated until the root system becomes bearded and matted. Saintpaulias have been observed to react this way. This matting of roots, actually a sign that the plant is in bad shape, has occasionally been interpreted as a sign of plant vigor.

Study of the meadow nematodes has been very difficult because they kill and move on. Once they have damaged a plant so that other organisms have penetrated and are causing actual decay the nematodes seek other plants. Investigators, called in after the crop is in trouble, have often failed to find the primary culprits.

The meadow nematodes are important agricultural pests. They have been found in saintpaulia, but how serious they are remains to be determined. From their habit of invading plant stems as well as roots it may be that they are the actual cause of some root-rots. And, because of their migratory character, they may spread faster through a collection than root-knot nematodes do. Further observation is needed on these points.

Only the root-knot nematode and the meadow nematode have been observed to date attacking saintpaulias. Rhabdites have been found, also dorylaims. This does not at all mean that other forms have not attacked them. Observation has been so spotty and incomplete that no real worthwhile information is available on the extent of infection by these two, let alone of the presence of others.

It is possible that the root-knot nematode and the meadow nematode, when they occur together, can cause death of plants whereas neither would do it alone. But this point has not been definitely proved.

There are several other saintpaulia conditions besides the ones already listed (root-rots, poor yield of seedlings, leaf knots, galled stems, etc.) that may have their origin in nematode attack:

a. It is likely that what one person calls "root-rots" another person would call "crown-rots", so many reported instances of each may have had a common origin in nematodes.



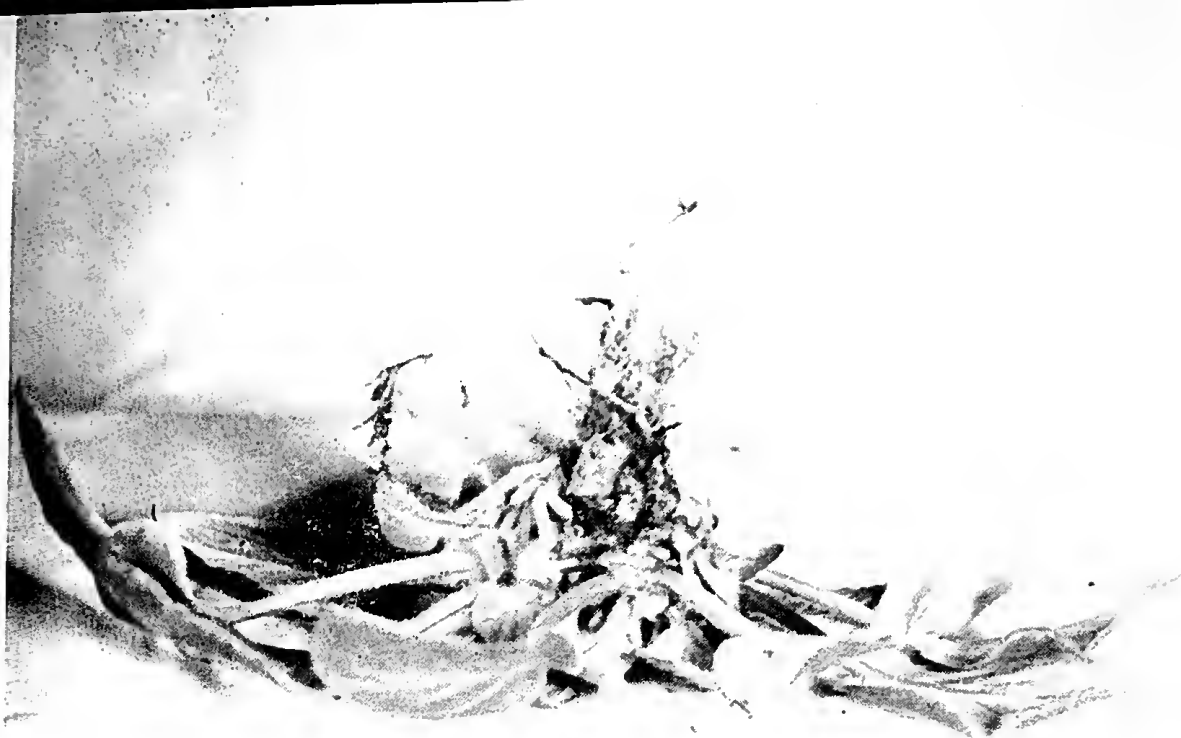


Fig. 3. The same plant as shown in Fig. 2, after up-rooting. Note how the stem has become galled at the soil surface and has expanded to several times its normal diameter.

The original root system has been entirely destroyed except for the two roots running off to the left. The lumps on these roots are not "root-knots," they are particles of soil adhering to the roots. It is not unusual for root-knots to be entirely lacking in such plants, even though they have been nematode damaged to practical worthlessness.

Plants with roots damaged by nematodes frequently react violently to selenium. This plant would probably have collapsed on the first application of sodium selenate no matter how cautiously applied. It seems likely that many of the sad experiences of loss of plants following selenium treatment were actually the results of nematode weakening of the plants.

b. Some persons who two or three years ago had beautiful, vigorous, free-blooming plants now find their plants continually looking poorer. No matter how much care and attention is lavished on the plants, no matter how diligent the watering and fertilizing procedure, and no matter what precautions are taken to control light, humidity, and temperature, the leaves have a wilted, unhealthy look, the blossoms become smaller, and the plants lack vigor and appeal. Frequently persons finding themselves in this position have in the past contended that soil sterilization was unnecessary, that plants "did wonderful in

the soil from grandfather's back yard." Perhaps they did originally, but three years ago Uncle Bob set out a row of hydrangeas along a nearby fence row. Unknown to anybody, the hydrangeas carried root-knot nematodes which spread, generation by generation, over to the place where the African violet soil was dug. When the first plant went listless due to nematode damage it was blamed on forgetting to water that particular plant. When the second went down it was assumed to be a weak variety. And when the third went down (a mail order purchase, re-potted on arrival) a hot letter of protest about the poor quality of the plant went out to the house from which it had been obtained. But now all the plants look more or less the same way, and the worried grower has run out of things on which to blame it.

Frequently people in this type of circumstance utterly refuse to face the fact that something is wrong with their plants, and their violet growing becomes a merry race between discarding listless plants and buying new ones. This sometimes has a most unique result: in the scurry to cover up plant loss by obtaining replacements or securing new varieties, the grower becomes the local variety expert.

c. There is a growing impression that people who have only a few plants have better plants than the "older" hobbyists who pride themselves on the large number of varieties they possess. Whether this is true or not is debatable, but if it is, it could be that the few-plant grower has been fortunate enough to get only nematode-free plants, whereas the "old-timer" got a nematode infested plant a couple of years ago and since then has managed, by

separating, re-potting, re-using soil and pots, etc., to infect most of her collection.

d. The difference of opinion as to the desirability of many varieties may also reflect nematode infestation. If most of the plants of a certain variety in a certain region were nematode infested (as could be the case if it were a new variety introduced by one dealer or plant-peddler) it would be regarded as weak and undesirable. In another section of the country, where the stock was nematode free, people might be enthusiastic about it.

e. Nematode infestation results in decrease in blossom size. The person who has never been able to get a duPont to produce more than a 1¾-inch bloom while she envied the 2½-inch bloom her Pigeon friend sent her may simply be struggling with another insidious effect of nematode attack.

f. There has been much concern over loss of leaves due to damage where they droop over the pot-edge. Experiments appear to indicate that it is connected with minerals, probably those concentrated in the pot edge by over-fertilization and bottom watering. The actual mechanism may be osmotic, the varying fluid densities occurring during a watering-drying out cycle being such as to produce pressures that would cause cell rupture and progressive petiole damage. But why do the leaves touch the edge of the pots in the first place? Nematode and parallel insect infestation frequently results in attack of the lower side of the petioles where they join the stem, and this may result in the leaves drooping so they ride the pot edge.

Nematodes have been able to masquerade behind treatments for other plant difficulties. Many erratic kills of plants by use of sodium selenate for cyclamen mite have been reported. In at least a portion of these cases the trouble was caused by a parallel infestation of nematodes. The plants couldn't take two infestations and a radical treatment at the same time. It is something like operating on a person for gallstones when he also has cancer. The operation may be entirely successful, but the patient will die nevertheless. Of course, no surgeon would perform such an operation because he is guided by adequate diagnostic procedures, but we, in our inability to recognize saintpaulia troubles, frequently do such atrocious things to our violets.

So far as African violets go, nematodes are the great imitators. They give no unmistakable symptoms of their presence or attack. They simulate other troubles or accentuate them, and they weaken plants so that other things, ordinarily harmless, prove fatal.

If some Evil Intelligence had set out to devise a malevolent system whereby a plant problem would be widely scattered and serious before being detected it could have hardly done better than has been done with African violets. First, the plant itself is readily susceptible to attack. Second, the plants are grown under conditions (greenhouse) where only the most stringent measures can prevent nematodes from becoming established. Third, adult plants, with soil attached, are shipped from all parts of the country to all other parts, thus making possible widespread distribution of

any plant infections that might have occurred. Fourth, the normal life of a plant involves re-potting and separating, with attendant possibilities of re-use of infected pots and distributive use of infected soil. Fifth, the worms are invisible or practically so, attack only unseen portions of the plants, and give no truly characteristic symptoms. Sixth, the actual symptoms of nematode attack are practically identical with other saintpaulia troubles that do exist by themselves and have become so much better known that there has been little tendency to look deeper to see if something else might actually be wrong. Seventh, the profit picture has been such as to attract a large number of growers, many of whom have had no previous knowledge of saintpaulia culture. These have ranged from careful, conscientious growers whose entrance into the field can only enhance it, to out and out chislers whose only interest in saintpaulias is to turn a quick buck. Included have been some who did not understand the greenhouse sanitation measures necessary for successful saintpaulia culture or could not make their help carry them out. Eighth, the situation has not been helped any by a number of misguided enthusiasts, who, under the guise of promoting a hobby but actually more interested in the money they can make by peddling plants, race hither and yon buying new variety names wherever they can find them cheaply enough, regardless of the sanitary conditions under which they were grown. No doubt some of these persons will be horrified to realize that certain plants (such as the Blue Mandy plants "that nice old man over beyond Albavale" sold them for twenty five cents apiece, which seemed a little bit wilted when purchased and which never became anything more than sick Blue Boys for anybody) may have introduced nematodes into the collection of every person to whom they sold one.

About the only bright spot in the picture is that nematodes are not highly infectious, and their spread through a collection is slow if the owner uses any kind of reasonable care in sterilizing soil and not re-using infective soil.

The information that nematode damage has been in the past, consistently confused with other types of damage will be surprising to many and will, no doubt, lead to keener appraisal of these difficulties, but we must guard against going too far and assuming that all of them are nematode caused. There are such things as root-rots and crown rots, there are organisms that cause rooting leaves to rot, there are such things as bad reaction to improper use of water, fertilizer, humidity, etc. Finding out the true facts of nematode damage to saintpaulias is going to be as difficult as it has been in the case of many field crops.

Some people have reported that they discovered their plants had nematodes by digging the soil away from the stem and seeing the little things skittering about. This is almost certainly not true, nematodes don't move that way. The thing most commonly seen has probably been garden centipedes. They are multi-legged white creatures about ½-inch long. They move rapidly and are easily seen. They are capa-

ble of primary damage, and do serious secondary damage if nematodes are also present. The non-sanitary conditions which introduce nematodes also frequently introduce the centipedes, so they often occur together. Thus the persons who assume their plants had nematodes because they saw the little things moving probably made the right diagnosis even though their observation was entirely wrong.

There is only one way to be certain that a saintpaulia ailment is or is not caused by nematodes. That is by direct determination of the organism itself by competent nematologists. Ordinarily these are available only at state agricultural experiment stations or U. S. Department of Agriculture experiment stations. So if you have a violet that is sick send it (or take it) to your state experiment station, tell them what the symptoms have been and ask if they can determine nematodes in it. Ask that any parallel infestations be determined and reported. Remember that your plant may be destroyed in the process. Some of the state stations will not have a nematologist, and will have to send your plant on to a U. S. D. A. station. So, before sending a plant, it would be advisable to write to your state station and inquire whether they can do the work and how the package should be addressed. If the package is not properly addressed, the plant may drift around the station for several days before reaching the right person and may be so damaged meanwhile that diagnosis of its original ailment will be impossible.

Eradication or complete elimination of nematodes has never yet been satisfactorily accomplished. All that can be done is to devise ways and means of getting along with nematodes so as to make possible raising of crops in infested soil. Methods that have been used in the past are: flooding, letting soil lie fallow, use of indicator or trap crops, rotation with nematode-resistant crops, etc.

In recent years soil fumigation with volatile chemicals has been introduced for field crops. It is quite expensive, requires considerable labor to apply, and must be applied early enough that the fumes will be entirely dissipated before planting time. Despite these disadvantages soil fumigation is widely used for such crops as cucumbers and melons where fumigation around each hill retards nematode attack sufficiently that the crop can be harvested.

In greenhouses, and for the home grower, soil sterilization before planting is not only practicable but is the only method of nematode control available. Sterilization with steam is the method most widely used in greenhouses, many houses being built with special provisions for carrying it out. But for the home grower the steam method is generally too cumbersome.

Soil sterilization by chemical fumigants is a convenient and easy method for the home grower. The only equipment that is needed is the chemical itself, an airtight container of some kind (such as a clean barrel, drum, garbage pail, etc.), a shovel, some means of measuring the fumigant (frequently marked right on the bottle), a clean place where the soil can be spread out

to aerate, and, most important of all, enough common sense to follow the manufacturer's directions.

There are several of these fumigants in common use. Formaldehyde and carbon bisulphide were formerly quite widely used, but have largely been displaced now. Chlorpicrin (tear gas) is good and is extensively used, but its record as a nematocide is not perfect. The brominated hydrocarbons, such as D-D, put out by the Shell Oil Co., and Dowfume N, put out by the Dow Chemical Co., are among the best available.

These chemical fumigants should be purchased only in packages put out especially for soil fumigation and they should be used according to the manufacturer's directions. While they are powerful chemicals, capable of producing sickness and death in humans if improperly used, they are relatively safe if used as directed by the manufacturer. They are quite generally available from seed and agricultural supply houses.

Sterilization by dry heat by placing the soil in a pan and heating in an oven is the method most readily available to the home grower. Root-knot nematodes are killed in all stages, adult, larva, and egg, by ten minutes heating at 140 degrees F. The 140 degrees F. must be reached throughout the whole soil mass for a minimum of ten minutes, a reliable thermometer should be used to check it. The 'potato test' can be used if a thermometer is not available: place a potato in the center of the soil mass and heat until the potato is baked. But be sure it is a good sized potato.

Soil sterilization not only kills nematodes but soil-living insects, larger worms, and plant seeds as well. Another advantage, seldom recognized, is that sterilization by any means increases the fertility of the soil far above what it would have been had the soil not been treated. Thus sterilization of soil will frequently result in better saintpaulias, even if there is no need to free the soil of insects, seeds, or nematodes.

It should be noted that no sterilization method available now provides any residual sterilizing effect. A soil batch sterilized one day by any method can be infected the next if an infested plant is placed in it.

Only the adults of root-knot nematodes lay eggs, and adults live only in plants. The larvae working through the soil, exhaust their food reserves and die if they cannot find roots to enter. So any area of ground that has been free of plants for more than two years will ordinarily be free of root-knot nematodes no matter how severe the infestation only a short distance away. This condition exists in such places as under porches and in chicken and hog yards. So anyone not wishing to sterilize soil will be fairly safe in using soil from these places. But use of such soil should be considered a poor substitute for soil sterilization.

Root-knot nematodes require about thirty days to go through one generation. In northern states, where the optimum growth conditions exist for only a few

months, they go through only three or four generations per year, hence are slow in multiplying to the serious-pest stage after being introduced. Further and further south, as the growing season becomes longer, the nematodes go through more and more generations, and become pests quicker. In the deep south conditions are favorable to their growth the year round, and they quickly become pests. This same condition exists in greenhouses everywhere, the root-knot nematodes go through about twelve generations per year, and the multiplication per generation may run several hundred fold, so they soon become present in enormous numbers.

Of course, window sill conditions are essentially green house conditions, the nematodes keep right on multiplying. This can explain why saintpaulias potted in soil taken from the family garden plot soon suffer from nematodes while spinach, beans, tomatoes, and potatoes (all subject to nematode attack) produce satisfactory yields in the same garden.

Indicator and trap crops are widely used for detection and control of nematodes in field crops. An indicator crop is one that is readily attacked by nematodes and produces easily recognized symptoms, such as changes in leaf coloring, definite knots on the roots, or characteristically galled stems. The presence of nematodes in harmful numbers in the soil can be detected and planting of vulnerable crops avoided.

A trap crop is one that attracts nematodes and cannot subsequently be destroyed. Use of a trap crop takes advantage of the fact that only adult nematodes lay eggs and that the larva die if they can't find roots to enter. If such a crop is uprooted before the nematodes have reached the egg-laying stage, the nematodes in them will die and the population be reduced as no new eggs will have been laid.

Indicator and trap plants would both appear to have possibilities of advantageous use by saintpaulia growers, particularly home growers. Most home growers prepare their potting soil in batches. A prepared batch of soil could be sown with an indicator plant before being used to pot violets and the roots and stems examined later for signs of nematodes. Thus nematode presence could be checked before using the soil for saintpaulias. Or a trap-crop could be planted and completely up-rooted in two weeks; this process repeated several times ought to free a batch of soil of root-knot nematodes.

While better indicator or trap plants may be available (such as the legumes *crotalaria spectabilis* or *lespedeza stipulacea* Maxim) the ordinary garden cucumber will probably be most readily available to the average grower. Cucumber seedlings are severely attacked by nematodes and exhibit characteristic galling of the roots. The improved hybrid or wilt-resistant varieties should be avoided, part of their superior qualities may lie in improved resistance to nematode attack.

As no techniques for use of indicator or trap plants in connection with saintpaulia

culture have been developed, it is a subject with which we amateurs could well experiment. There are definite possibilities of developing information of value to ourselves or other amateurs.

Remember that the essence of the trap crop procedure is that the trap crop must be up-rooted and destroyed before nematodes can grow to adult stage in it. This length of time varies, under extremely favorable conditions it may be as little as two weeks. So a trap crop should not be allowed to live longer than that and probably destruction ten days after planting would produce more certain results.

The soil must be kept moist and warm for maximum hatch of eggs and activity of larvae. The soil should be treated as it would be if violets were growing in it.

The possibility of reducing infestation on saintpaulia by growing with them other plants more readily attacked by nematodes should not be overlooked. Nematodes do prefer some plants to others. It might be possible to start some other plant in the same pot, destroy it after a few days, thus using it as a trap plant; or let it remain as a preferential host, thus reducing the infestation of the violets. This is a field in which no information is available, hence no plant or combination of plants is too ridiculous to try. Such plants should always be grown from seed, however, to avoid the possibility of introducing nematodes with roots or soil.

The fact that saintpaulias are a very difficult crop to raise is generally overlooked. Not that their propagation or growth is hard to produce (witness half the window sills in the country) but that the conditions of their sale are almost unique. When most other crops are harvested (i. e., pass from the hands of the original grower) they change in nature, wheat and corn become grain, apples and oranges become fruit, tomatoes and string beans become vegetables, and carnations and chrysanthemums become cut flowers. The conditions of further processing and handling become far different, the responsibility of the grower for insect and pest control ends when the crop is harvested. Not so with African violets,—they are purchased only as plants, are expected to have a long life after purchase, and are placed among other plants which they will infest if they carry insects or diseases. The responsibility of the original grower thus extends beyond the time of sale. This condition makes necessary the maintenance of sanitary conditions far above those required for most other greenhouse crops. Reputable growers know this. Some of them have had their difficulties in the past, and have alienated portions of their clientele. But, by and large, the recognized saintpaulia suppliers are among the most careful plant growers in the country. They can be relied on to adopt advanced sanitation practices as soon as they become of proved necessity or applicability. They have too much invested in equipment and reputation to do otherwise.

Continued in September





Photograph by A. Langford

## GROWING GLOXINIAS FROM LEAVES

Lauretta L. Littig, Iowa

Though I start my violet leaves in vermiculite, I prefer to start my gloxinia leaves in water, so I can see when the tuber forms.

The leaf is put in soil as soon as the tuber gets about the size of the end of my thumb, using practically the same soil I use for violets. I like a five-or six-inch pot, rather low.

When potting the leaf, I wet the soil and put it in the south window, watering it sparingly from the top, as it doesn't need much until the plant starts. The leaf will die down completely and come off. After waiting for weeks, you will just about decide there is nothing there; then one morning you'll be surprised and thrilled to see the first little leaves coming through. The foliage is green and velvety looking. As the plant gets older, the leaves get coarser and very large. It will then require more water, especially after it starts blooming. In real hot weather, I have had to water twice a day.

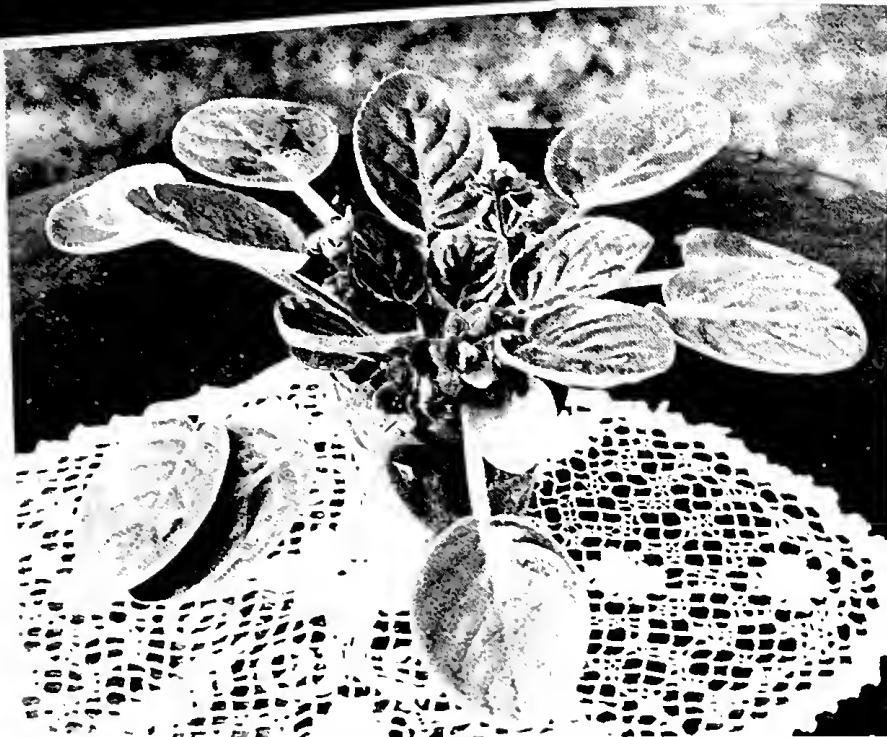
As soon as it starts to bloom, I put it in the east window, but do not let the sun shine on the blossoms. After it finishes blooming, I gradually reduce the watering

to two or three times a week. The plant will gradually die down, when I put it in the dark corner of the fruit cellar. About the last of November, or not later than the middle of December, I repot the tubers, whether they have started to sprout or not. It seems to me I get the best plants if I repot before they sprout. I like to start them early as the plants don't seem to do so well in real hot weather.

The plant shown in the picture is a bright crimson with a white throat, the inside covered with red specks. I started the leaf eleven months before this picture was taken. It had twenty-four blossoms.

This particular plant had rather a hard time making the grade. I neglected to pot the leaf when I should have, and the tuber got so large I could not get it out of the bottle. After a lot of turning and squeezing I finally worked it out. After it was potted and growing fine, I accidentally dropped the Venetian blind on it and broke it right where the leaf met the soil. However, it was not entirely severed, but was barely hanging on by the "skin of its teeth." I left it and it remained firm and green as ever. Eventually it turned out to be one of my nicest plants.





DOUBLE NEPTUNE



LAVENDER

## *Selections from*

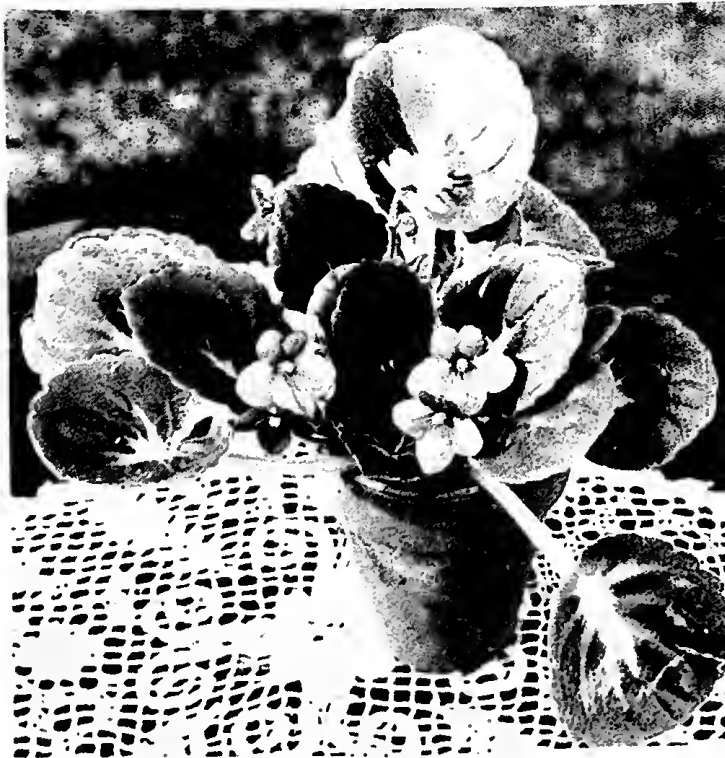
## Ulerys . . . . .

It is indeed difficult to know where to start when describing the lush new violets being grown at the Ulerly greenhouses. Mr. Dale Ulerly and Mr. Paul Slough have been doing some fine hybridizing and the results are most pleasing.

When we think of Ulerys, of course we think of Blue Girl with it's distinctive foliage. The new Girls have foliage that is "out of this world." The leaves are satin smooth, shiny, and beautifully scalloped with the interesting white marking very pronounced. In addition, the foliage is less brittle, almost flexible, which means that it will travel well. They would certainly be beautiful even if they never bloomed, but they do bloom and profusely.

The love of all who have seen it is Sailor Girl No. 1, a heavenly light blue. There are also various shadings of a good blue being called Sailor Girl No. 2, No. 3, etc.

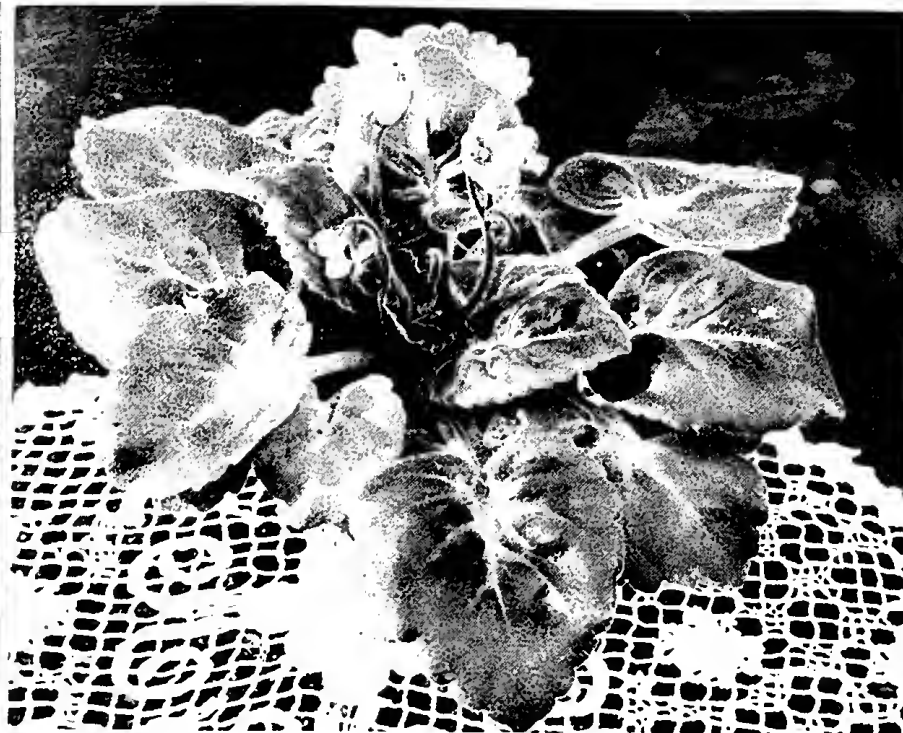
Purple Girl, as it's name implies, is a rich purple with the luscious satin Girl foliage. Lavender Girl is a delicate lavender shade and Red Girl has a good red bloom with a bronze cast; the bloom is a lovely red. This is called Bronze Red Girl. So much for the girls.



PURPLE GIRL



ER BI COLOR



SAILOR GIRL NO. 1

# Spring Introductions



BRONZE RED GIRL

There are other outstanding violets. A very attractive light lavender two-tone is called Lavender Bi-Color and a lovely pale violet bloom is called Violet Beauty.

There is another Bi-Color I have not described. They are calling it Gorgeous Bi-Color, it is pretty and somewhat bi-color, has smooth ordinary foliage. Color of blooms are lower petals R. V. 6 top petals V. 3.

The best double to date is Double Neptune with typical Neptune foliage and a magnificent color.

Another nice double is one with large purple blooms and dwarf foliage.

Red King is the best red yet seen. It is a deep rich velvet red which does not fade out. It has nice foliage, too.

Sunrise and Lavender Beauty are lovely shades of lavender, combining large blooms and good foliage.

Quite striking is Orchid Neptune which combines a lovely orchid bloom and Neptune foliage.

The very best was saved for last. It is called Blue Eyed Beauty, an appropriate name indeed. It flaunts a glistening white bloom of good size with a distinctive blue eye, which is very pronounced and effective.

# AFRICAN VIOLETS AS A FAMILY HOBBY

By Ruth Dahnke, Kan.

July 28th was a day long to be remembered in our home with African violets. The mail had come, including a letter from Harvey Cox. The family always enjoys hearing his letters; they never fail to bring something new and interesting about African violets. With the letter in my hand I went to the screened porch to see what some of his crosses would be with the foliage of one variety and the flower of another.

When I looked at the plants the first reaction was, "Oh No! Not that!" The varieties were forgotten. I had never seen a Mealy-bug but had read and heard so much about them, I was prepared to recognize them immediately. The plants were literally covered; the day before there had been none. How could they get there so fast and so many of them? Mealy-bugs were supposed to be white; these were pink. Dr. Alex Laurie had covered the subject of insects thoroughly at the Convention but he had said nothing of Pink Mealy-bugs. Well, if the plants were going to succumb to the pests they at least had been particular and chosen an uncommon variety. Some of the plants I had brought back from Cincinnati, and I knew Peterson's used Sodium Selenate. The plants which had not been repotted were infested the same as the others. It just didn't make sense: Blue Butterfly, Purple Prince and Red Head were well known, but Pink Mealy-bugs I just couldn't understand. They were even on the floor of the porch. The letter in my hand brought to mind the receipt had also come for our Polio Insurance. I realized what had happened. Last week my husband had sprayed Chlordane and D.D.T. on the doors and screens as well as shrubbery and grass to kill any insects carrying Polio germs. This was the D.D.T. powder for the dog. The search for the flea powder came next to determine what it contained other than D.D.T. It listed Active Ingredients: Dichloro-Diphenyl Trichloroethane - 10% Inert Ingredients - 90%. I started blowing the powder then remembered the box also read "Avoid excessive inhalation." Spraying with warm water only made the powder stick to the foliage so a large canning kettle was used so that the plants might be immersed. The spots only got more pink. Warm suds were next and at last the spots were gone leaving small light spots after being rinsed with clear warm water. After washing 160 plants, some of them eighteen inches across, with as many as thirty-eight blossoms, down to small plants it was evident Pestmaster Insecticidal Powder must certainly stick to a dog from the way it stuck to the hair on those plants.

Many times those same plants had served to make us forget things that were upsetting, so we can laugh at the Pink Mealy-bugs. One evening when our older son was out, the streets became covered with ice. Sleep was out of the question. Kidding about knowing what our parents went through, we made coffee and sandwiches then got interested in comparing the different varieties of African violets. Our son came home, teased us for waiting for him, looked at the African violets and went to bed, but we were still engrossed with the violets.

I am even used to seeing a flower with a piece of colored thread tied to it and a notation Blue Eyes x Pink Beauty, even White Lady x Yellow Viola; the result of one of the boys or my husband after that Yellow African Violet. Varieties even seem to interest our family as they usually call a plant by its name. My husband has a little trouble keeping the many names straight; one evening he brought a small plant to the kitchen to show me. When I asked which one it was I was certainly surprised to hear, "I don't know but I think it is Shady Lady". Perhaps one of our tiny seedlings will be a new variety, and, if it is, it will most certainly be "Shady Lady".

African violets as a family hobby? Absolutely. It is fun to have your children enter plants they have raised in competition against you in a show and (confidentially) fun to see him win ribbons over you.

It was quite evident at the Convention in Cincinnati, many husbands share the housewife's hobby. I wonder if they, too, when beginning to be a collector, would bring the new additions to their collection in through the basement when their husband got home ahead of them, hoping he wouldn't notice you were confiscating more space for your beloved violets. The Ping-Pong table has often been the subject of glances with the idea of a wonderful place for more violets: as yet the Model Airplanes still have occupancy, but we are patient. The portable knotty pine shelves are full to overflowing with two hundred and eighty plants with more leaves in propagation. All this started three years ago when a friend gave me a leaf of Blue Boy. Pink Beauty, White Lady and then the others just had to accompany Blue Boy. After two National Conventions we agree; there is no other plant like our African violet for a hobby for the whole family, to meet such interesting people and make real friends.

# SOME NOTES ON CROSSING SAINTPAULIAS

Carolyn Rector, Calif.

The results most likely to be secured with any crossing of plants requires a working knowledge of Mendel's law. When plants are crossed, provided both the pollen parent and the pistil parent are species, one will be dominant and the other recessive in the combined characteristics of the hybrid. Which plant is dominant and which recessive in any characteristic is usually determined best by experiment. But since the species from which our present day African violets were obtained is *Ionantha*, it is therefore logical to assume that tall upright growth and blue flowers are two of the dominant characteristics. It then follows that the colors and shapes of our other plants are recessive.

But unless we are using *Ionantha* for a seed parent we are using plants that are already hybrids, in which dominant and recessive characteristics are so far masked that Mendel's law appears not to apply. It does, however, continue to apply to the end of all hybridizing, regardless of the number of crosses that have been made.

Taking *Ionantha* for the seed parent, and our other species, *Kewensis*, for the pollen parent, in the first cross we would expect to find all the seedlings looking like little *Ionanthas*, as among the *Saintpaulias* the *Ionantha* characteristics are apparently dominant. At first glance it would seem that our cross is a failure, but not so. Cross these with both parents and also with each other, and also self pollinate each one. This will produce the first variations. Of every four plants produced, three will show the dominant characteristics and one the recessives. Now back-cross these with the original two parents, *Ionantha* and *Kewensis*. This time you will get your first real mutants, or plants with blended characteristics.

At this stage select the plants which come nearest to the type you wish to produce, and cross it with its own pollen. If none of them quite suit you, select a plant which shows the nearest to the wanted type, and using it for the pistil parent, use on it pollen from any plant which comes nearest to your wanted type.

To produce a fixed type, continue to cross with its own pollen, always selecting the best and most typical plant, until no variations show in the seedlings.

Working with hybrids takes much less time, as the mutants will often appear in the first generation, and almost always in the second.

There are certain rather wide-spread beliefs which should be disregarded in the beginning. One is about color. The color of flowers will not mix like paint. You cannot cross a red flower with a white flower and produce seedlings with pink flowers. You will probably get some with red flowers and a few with white flowers. But by recrossing these you will get flowers with different shades of red, and may by selecting and crossing again eventually get a pink.

The shape, size and growth habit of the hybrid from hybrid parents is most likely to resemble the pistil parent, and the coloring is most likely to be that of the pollen parent.

As all our hybrid violets are the result of numerous previous crosses, the results of a cross may vary considerably. Generally we may expect that of a dozen seedlings, nine will more or less resemble the seed parent, and three will look more like the pollen parent. If you want a seedling with "Girl" leaves, for instance, use Blue Girl for the pistil parent.

The first cross seedlings will probably not produce the plant you want, though it may produce one good enough to keep, of a type you had not expected. Self pollinate them all, and also cross them back to the original parents.

From these seedlings select a dozen, let us say, of the most marked types. (Of course, if you have room enough, you can keep them all). Cross the two most like the seed parent back with the original seed parent. This gives one chance in sixteen of producing something really good. Also cross it back with the pollen parent. The chances here are the same.

Repeat this process with the two nearest like the pollen parent, that is, backcross with the pollen parent and also with the pistil parent. Here again your chances are one to sixteen.

Cross the two most like the pistil parent with the two next most like. Here your chances are one to sixty-four, but if you do get a mutant, it will probably be the best of all.

Cross the others with each other, and also self pollinate them. With these, your chance of a very good one is one in four.

By this time, you will be worn out and ready to quit!



# FACTS AND FANCIES ABOUT SAINTPAULIAS

Presented at the convention of African Violet Society of America, Inc., Philadelphia, Pa., May, 1950.

John G. Seeley, Department of Horticulture  
The Pennsylvania State College

Experience has taught us much about the growth and flowering of African Violets. The good plant grower observes his plants and manipulates the water supply, temperature, light and nutrients to get healthy foliage and many nicely colored flowers.

The modern research worker in floriculture is interested in how and especially why plants react as they do to certain environmental conditions. How do African Violets respond to different conditions? Let us first obtain our plants and then see how they grow.

Start with propagation. Probably all of you are familiar with leaf petiole cuttings. The petiole is stuck in some propagating medium such as sharp sand, sand and peat mixture, vermiculite, or water. Before long, roots start to form, and soon a crown is evident.

Does the length of petiole have any effect on rooting? Cutting with one inch petioles root as well as those with two or three inch petioles. When, however, the petiole is much less than one inch long, it often does not support the leaf well and rotting of the leaf may occur.

The relatively new material called vermiculite has been excellent for rooting African Violet cuttings. Why do some people have poor success? Our experience has been that the vermiculite, although it may look wet, often is not wet enough. If the bench, flat, or pot containing the vermiculite has good drainage so that excess water can drain away, water the vermiculite every other day or every third day. Too much water? No, not if the excess can drain away.

Do not pack vermiculite around the cutting. It is a fluffy well aerated material, but when packed it becomes soggy and poorly aerated. We all know how important oxygen is for the formation and growth of roots.

After the crown has started to grow, the small plant is potted in a good soil. Probably everyone has his or her pet soil mixture that he or she thinks is best. If you are having success, don't change.



Dr. Seeley

Plants are not as particular as we sometimes think and many different soil mixtures will produce good African Violets. It should be loose and friable with a good organic matter content. I like to mix together about 2 parts by volume of a good garden loam, one part of peat moss, composted organic matter, or rotted manure, and one part of sharp sand. In one bushel of this mixture I thoroughly mix a three inch pot of 20% superphosphate. You may use bone meal if you prefer.

With a mixture like this, fertilizer will not have to be applied for about 4 or 5 months. Then I would use a little complete fertilizer once every 4 or 5 weeks. African Violets are not heavy feeders. A teaspoon of 5-10-5 complete fertilizer in a quart of water will give a good fertilizer solution.

African Violets have been found to grow best when the soil is kept continually moist, as long as you do not waterlog the soil. Do not allow the soil to become dry. Have you ever tried plugging the pots up to the rim in sand and keeping the sand moist? Commercially, this method is modified and a constant level of water is maintained about one inch below the bottom of the pot. This is known as the constant water level method.

No doubt many of you have used other automatic methods of watering, especially pots with glass wicks. Standing the pot in a dish of water is another good procedure. The only word of caution is that nutrients tend to accumulate at the soil surface and may injure the petioles. I like to water mine on the soil surface once every five or six weeks to wash these nutrients back down into the soil.



When we think of water for African Violets, we visualize the yellow and white spots and ring designs that may appear on the green leaves. Trouble with ring spot was common until it was found that cold water was the trouble maker.

Sunlight heats African Violet leaves. Here is what happened in one experiment. Although the air temperature was 77° F., leaves in a light intensity of 4000 foot candles, which is half that of a bright day in summer, were found to have a temperature of 97 to 98 degrees. A few drops of ice water on this leaf caused the leaf temperature to drop 35 degrees in 30 seconds. A darkened area was noticeable immediately and within a week a white leaf spot developed. Similar results were obtained with 40° water on plants in a 60-70° air temperature.

Leaves were sectioned and examined under a microscope. The cells of the palisade layer had collapsed in the ring spot area. It is theorized that water moved in the leaves from the warm cells to the cool cells and the excess water ruptured the cell walls.

If there is any possibility of water falling on the leaves, it is best to use warm water. For the same reason when spraying African Violets, use water about 2 to 5 degrees warmer than the temperature of the room. Watering the plants at a time when the sun is not shining on the leaves is another good precaution.

One of the most important factors affecting the flowering of African Violets is light intensity. Young plants will develop well without flowers in a low light intensity; for good flower production, a medium light intensity (1000 to 5000 foot candles) is preferred. This explains why plants grow best in one window exposure at one time of the year and in some other window at another season. If the light intensity is too high, the foliage becomes light green.

The leaves also become light green and convex when temperatures are too low. A night temperature of 65-68° F. is excellent; the day temperature can be 10-15 degrees higher. Don't allow the temperature to go below 60°. This may necessitate moving plants away from the windows on cold winter nights.

Often the question is asked as to how to carry plants through the summer. The African Violet is tolerant of rather high temperatures if the plants are shaded to reduce the high light intensity and if the soil is kept moist. I have seen Blue Boy, Pink Beauty and White Lady growing vigorously and blooming in a greenhouse where the daytime temperature often was 100-115° in the summer months.

There are not very many troublesome diseases and insects on this plant. African Violets occasionally have a white powdery growth on the leaves or stems. This is a powdery mildew and can be controlled by a sulphur dust or spray. Sometimes plants

are affected by a stem rot. It is good insurance to use "sterilized" soil. For small quantities of soil, the formaldehyde method is a good one. Mix 2½-3 tablespoons of commercial formaldehyde (40% formalin) into a pint of water and mix this solution into one bushel of soil. Put some wet newspapers on the top to confine the fumes. After a few days, spread the soil out on paper to get the formaldehyde out of the soil. Do not use the soil until you can no longer smell any formaldehyde.

The most troublesome insect is the cyclamen mite which causes young leaves to remain small and become curled and deformed. Spray with Hexaethyltetraphosphate (H.E.T.P.), which is a new material sold under various trade names; follow the directions of the manufacturer. Instead of spraying the plant, sodium selenate may be applied to the soil. The selenium is absorbed by the roots and travels through the plant to the leaves. As the cyclamen mites suck the juices of the leaf tissue, selenium also is taken in and the insect is killed. An application once or twice a year should be sufficient. Remember that this material is a poison to human beings and therefore should not be used on soil which may be used for vegetable plants. Only very, very small amounts need to be applied to the soil; too much will kill the plant. Adhere strictly to the manufacturer's recommendations.

Another troublesome pest is the mealy bug. H.E.T.P. does a good job on this one also.

In spite of all the possible troubles we have discussed today, the African Violet, with reasonable care, is one of the best house plants we have. What other plant has such nice foliage and colorful blooms every day of the year? Good luck with your African Violets!

## SUMMER SPECIAL

### AFRICAN VIOLET LEAVES

Nine leaves of the following outstanding new varieties at \$5.00 postpaid. One leaf to an order of: White Girl, Fantasy, Lady Constance, Supreme BiColor and Tunia's Cleveland Indian. No limit on these: Blue Warrior, Blue Chard, Double Neptune, Mentor Boy Supreme, Gorgeous BiColor, Saffron Red Boy, Red King and Lavender Pink Princess. Fringette Series 50¢ per leaf. Send stamp for list.

**HELEN POCHUREK**

14225 McCracken Road, (Off Rt 14)  
Cleveland 5, Ohio

## SIZE OF PLANTS -- LARGE OR SMALL

Harriet F. Lawton, Mass.

Which will it be? There are times when one will grow either large or small plants from preference. Again, one may be forced to stick to the smaller plant due to a limited space. But, let's take up the matter of the growth of the plant from the purely artistic side.

I have often heard African Violet fans ask, "Why is it my plants grow suckers or multiple crowns? Can something be done about it?" "Yes, there is something that can be done about it and this can be kept somewhat under control". The usual practice has been to allow a plant to remain in one pot, forming multiple crowns and left alone and undisturbed as long as the plant has any bloom on it. Actually many times the poor thing needs to be separated.

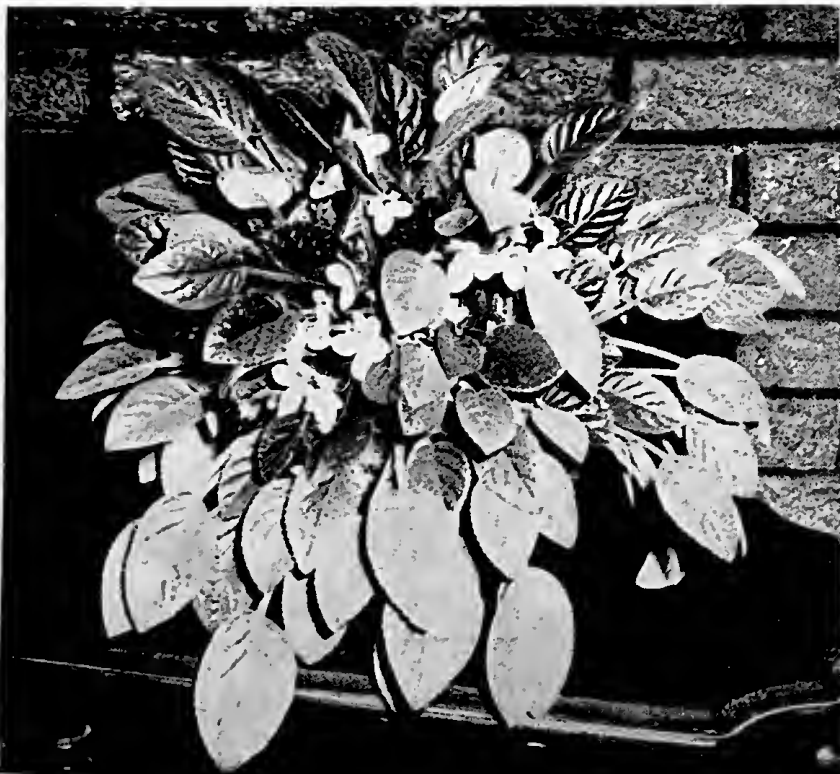
When the Saintpaulia plants come directly from the greenhouse, they often come more or less bunched up or with multiple crowns. As a rule I divide such a plant, excepting for those that are too closely bound together by a common root, which would cause too much shock. Each crown is put in its own pot and must be watered with extreme care, being careful not to overwater until it shows new growth in the center, at which time one may water more liberally. I do likewise with plants propagated from leaf. As soon as the various plantlets form roots of their own and are large enough, each is given its own pot in which to expand. Often such a plant will fan out, forming a beautiful crown of its own. Again, now and then, a plant will be very stubborn and persistent in throwing out suckers or new crowns. There seems to be no rhyme nor reason for

it, as it does not appear to be true in one variety more than another. But, some plants are more inclined this way than others.

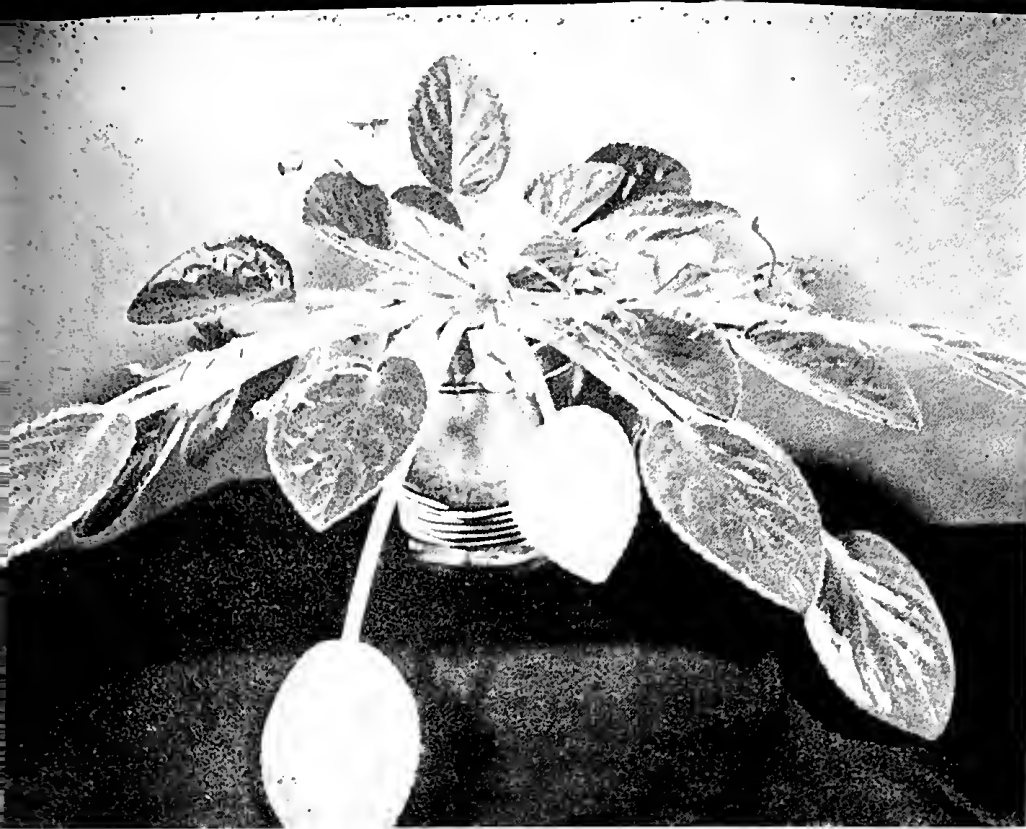
Some time ago in this magazine, (Vol. 1 No. 3 to be exact) appeared an article entitled, "Valuable Pointers given by R. G. Harvey." One paragraph of this group was called "Suckers". I am quoting this paragraph for the benefit of those who were not members of the Society at that time. Mr. Harvey says, "Cut 'em off quick. Don't let them develop into multiple crowns. According to my prejudiced idea, every time you have to divide a plant because it has developed a multiple crown, you admit poor care of the plant. — to let the multiple crown develop. If you want new plants, start leaves."

This idea of keeping plants to a single crown rather intrigued me and I have been adopting this method ever since with some quite stunning single crown plants as a result. A good tool for this purpose is a pair of tweezers such as comes with a manicure set. When the suckers are tiny, snip them out or break them off with the tweezers. Make sure however, they are tiny new crowns or suckers and not new buds. When buds first come through, they sometimes have tiny leaves on either side of the first bud of a flower stem. These can be mistaken for new crowns if taken too early. Plants treated in this way are very shapely.

So, although I feel the large, single crown plants are quite stunning, lack of space and circumstances force me to keep



A LARGE AND  
BEAUTIFUL  
MULTIPLE CROWN  
IONANTHA



ROSE HAHN'S  
SINGLE CROWN  
IONANTHA

Photo by Ross Hahn

more of the smaller and medium sized plants. One may keep plants small by frequent division, if they choose. The smaller plants do have their advantages, too.

In my own case, our space is extremely limited. Glass shelves were put up on a sun porch to increase shelf space so as to accommodate more plants. These shelves will take anything up to a four inch pot. Beyond that, the plants begin to spread. This soon interferes with protecting plants from summer sun by use of curtains or other shade. The leaves will soon be in too close a contact with the screens. Situated in this way it soon becomes essential to keep a number of the smaller violets. Small plants when in flower can be very decorative, but to me, a large, well groomed plant with a perfect whorl of leaves radiating symmetrically and with no multiple crowns is quite a stunning thing when in bloom. It also makes for a much

prettier plant when not in bloom. A violet of this type is particularly stunning when given a place or a setting of its own away from a group of plants.

Now, this practice of keeping Saint-paulias to a single crown is fairly new to me and there are one or two questions I would like to have answered, if anyone reading this has the information. What life span may one expect of a large single crown plant as against one allowed to go on forming multiple crowns? Over what length of time may one expect such a plant to bloom without resting as against the multiple crown? What are the number of blooms that might be expected at one time, (of course this varies with the variety) as against the multiple crown and how do the size of the blossoms compare?

I know I will find this out in time from experiment, but would be glad for someone who has the information now to pass it out to me. Sort of a short cut ! !

#### AFRICAN VIOLETS

Brown's Lilac Princess, Blue Pet, White Lassie, Sailor Girl, duPont Red, Double Neptune and Lady Geneva, \$1.50 each. Fischer's Fringettes, leaves only, collection of all 6 \$3.00. Free price list.

MRS. T. C. BEE  
Route 3  
Newnan, Georgia

#### AUTOMATIC WATERING FOR YOUR AFRICAN VIOLETS

Send 45¢ for one Glaswick, plastic saucer and instructions (3 for \$1.25) or 50¢ for 3 wicks only postpaid. Use your own pots. System recommended by Dr. Post of Cornell. Remarkable results.

ATLAS ASBESTOS COMPANY  
Box AV North Wales, Pa.

# THEY'RE THE SAME TO US

The Knoxville Saintpaulia Society, Tenn.

At a recent meeting of our Society it was decided to submit this list of varieties of saintpaulias which have in our experience proven to be identical in most respects.

Because many varieties have different names in different localities we are listing the following as we know them.

Admiral and Irene are the same.

Amazons and Supremes are the same.

Amethyst is also called Lavender Lady, Light Orchid, sometimes Orchid Beauty, Orchid Lady, Pink Amethyst and Zig. Begonia Blue, Begonia Bell, Twilight and Blue Bird (from some sources) are the same.

Bi Color is also called Red Bi Color.

Blue Boy is also called Blue Boy Profuse and Blue Darling.

Blue Boy Supreme and Blue Amazon are the same.

Blue Eyes has been called Blue Skies in some localities.

Blue Girl and Blue Bonnet are the same.

Blue Scoop is also called Chicago Scoop.

Blue Treasure's other name is Blue No. 3.

Blushing Maiden, Blush Beauty, Blushing Lady, Blush and Maiden's Blush are the same.

Commodore is also called Commander, Dickson's Purple, Imperial and Commando. Dainty Maid and Pink Lady are the same. Double Blue Boy, Double Dipper, Double Duchess, Double Russian, Double Wonder and Silver Wings are essentially all the same variety.

Double Orchid, Double Mary Wac, Regal Wine, Fischer's Masterpiece and Fischers Double Dark Lavender Selection are all essentially the same variety.

du Pont Lavender Pink and du Pont Pink are the same.

Fantasy and Freckles are the same.

Frieda is also called Red Ionantha.

Gorgeous' other name is Grand Lady.

Ionantha is also called Amethyst, Blue Violet, Ionantha Improved, Ionantha Grandiflora and Rhodes No. 1.

Jessie, West Coast Amethyst and Amethyst Pink are the same.

Lancaster Red is also called Red Spoon and Droopy.

Mauve, Holbrook's Red and Plum Satin (from some sources) are the same.

Neptune, Agate, Lady Marion and Lorene are the same.

Orchid Beauty is also called Trilby, Mary Wac, Orchid Queen, Orchid Red, Plum Pink, Plum, Vivid Plum, Vivid, Betty Joe, Garnet, Carter's Red, Orchid Lady and Good's Orchid. These are all very similar

varieties and may be considered the same. Old Lace and Curly Special are similar. Pansy Purple and Chattanooga are the same.

Orchid Girl's other name is Red Head Girl. Pink Beauty is also called Pink Perfection, Pink Lady and Pink Princess.

Pink Girl is called Pinky.

Pink Supreme and Pink Amazon are the same.

Purple Prince and Merkle's Red Purple are the same.

Red Amazon, du Pont Tu-Tone and Red Supreme are the same.

Sailor Boy is also called Baby Blue Eyes and Alma's Blue.

Sailor Girl is called Light Blue Girl.

Summer Skies other name is Lithium.

Starlight, Waterlily, Swinburne's Delight and Commodore (from some sources) are the same.

Tinted Lady is also called Sky Blue and Gray Lady.

Viking, Royal Sunset and Supreme are the same.

## IS THE VIOLET GOING TO COLLEGE?

Priseilla Laudaker, Ohio

On February 27, 125 members and friends of the Queen City Violet Club enjoyed a luncheon party at the Party Mart in Cincinnati. This was occasioned by the fact that our beloved child, the African violet (or to be more cultured shall we say "Saintpaulia"?), is aspiring to a higher education of its own.

After lunch and much chatter and fun during a broadcast (we were on the air) we tried to settle down to games, bridge, canasta and bingo. An eyestopping array of violet plants had been donated for prizes, as was a luscious ham and a beautiful hand-made lace apron which was the product of the skilled hands of our own Mrs. Albers. During the afternoon several of our energetic members sold chances on these articles, the money raised to be donated toward the scholarship fund.

At our March meeting, when the profits were reported, all members were pleasantly surprised, and pleased at the prospect of our being able to help so substantially toward this project of the African Violet Society of America, Inc.

Here in Cincinnati we are proud of our president, Mrs. Arthur Radtke, and want to do all we can to further her work and that of the National Society.

# COMMITTEE ON REGISTRATION REPORTS

Boyce M. Edens, Chairman

Applications for registration of the following additional varieties of African violets were received and recorded during the period from January 17, 1950, to March 15, 1950.

BLUE DREAM,  
Mrs. C. T. Hughes, Huntington, W. Va.  
January 24, 1950

ROSE CHIMES,  
Mrs. C. T. Hughes, Huntington, W. Va.  
January 24, 1950

MISTY BLUE,  
Mrs. C. T. Hughes, Huntington, W. Va.  
January 24, 1950

BLACK RUBY,  
Mrs. C. T. Hughes, Huntington, W. Va.  
January 24, 1950

MAY DAY,  
Mrs. C. T. Hughes, Huntington, W. Va.  
January 24, 1950

RED SURPRISE,  
Mrs. C. T. Hughes, Huntington, W. Va.  
January 24, 1950

PAINTED BALLERINA,  
Mrs. C. T. Hughes, Huntington, W. Va.  
January 24, 1950

NORSEMAN SUPREME,  
Tinari Floral Gardens, Bethayres, Penna.  
January 17, 1950

MAY GREER,  
Mrs. John C. Wills, Elgin, Ill.  
February 3, 1950

MI-JO  
Mrs. John C. Wills, Elgin, Ill.  
February 3, 1950

SHERRI,  
Mrs. John C. Wills, Elgin, Ill.  
February 3, 1950

UNIQUE,  
Mrs. John C. Wills, Elgin, Ill.  
February 3, 1950

BONNY GIRL,  
Mrs. Myron Maybach Sr., Hamburg, N. Y.  
January 14, 1950

HOOSIER BEAUTY,  
Mrs. Irvin Furnish, Florence, Ind.  
June 30, 1949

BT O' HEAVEN,  
Mrs. W. H. Odom, De Witt, Iowa  
February 6, 1950

BLUE HEAVEN,  
Mrs. W. H. Odom, De Witt, Iowa  
February 6, 1950

BLUE MARION,  
Mrs. W. H. Odom, De Witt, Iowa  
February 6, 1950

BLUE PERFECTION,  
Mrs. W. H. Odom, De Witt, Iowa  
February 6, 1950

TOPAZ AMAZON  
Mrs. W. H. Odom, De Witt, Iowa  
February 6, 1950

UPJOHN,  
Mrs. W. H. Odom, De Witt, Iowa  
February 6, 1950

DOUBLE BLUE BOY SUPREME,  
Mrs. W. H. Odom, De Witt, Iowa  
February 6, 1950

PURPLE GEM,  
Mrs. W. H. Odom, De Witt, Iowa  
February 6, 1950

OLD ROSE,  
Mrs. W. H. Odom, De Witt, Iowa  
February 17, 1950

IRIDESCENT,  
Mrs. Ott Rule, Fountain City, Tenn.  
February 10, 1950

LUCKY GIRL,  
Mrs. Andrew G. Lewis, Salem, N. J.  
January 30, 1950

These additional applications for registration are published in accordance with Section 19 of the Code Of Rules For Nomenclature And Registration (revised). Anyone desiring to file an objection to any of the foregoing applications for registration may do so. All such objections should be sufficiently detailed in a letter addressed to the Chairman of the Committee on Registration, 2694 Lenox Road N. E., Atlanta 5, Georgia.

## NOTICE OF CHANGE OF NAME

Attention of both amateur and commercial growers is directed to the publication of an application for registration in the March 1950 issue of the Magazine of a variety named LANCASTER RED, by Mrs. C. G. Landis, Lancaster, Penna. The statement accompanying her application indicates that she purchased a plant of this variety some fifteen years or more ago, and explained the way in which she has since distributed it to a number of other growers, both amateur and commercial. This variety is now being carried in the catalogs and sales lists of several commercial growers under the name Red Spoon. This notice is published in the interest of seeking the cooperation of everyone, and especially commercial growers, to use the correct, registered name LANCASTER RED in all future catalogs, sales lists and in correspondence.



## THE PARTY LINE

R. E. Memberthis

(This is for fun, too — Editor)

Mrs. St. John put down her watering can, gave one last admiring glance at My Lady Frances, and went to answer the telephone. She knew that there would be an uninvited audience, because the bell stopped ringing just as she was reaching out to lift the receiver. This always meant that one of her "dear" neighbors had beat her to the punch. While she said "hello" she was conscious of another faint "click" - indicating that the audience was being increased.

"My dear", came from the other end of the line, "I have wonderful news for you. I just discovered that Jessie has four babies. Unfortunately, Myrtle has only had one so far. I have a lot of hopes for Myrtle, though, as I understand she is quite prolific. Poor Mrs. Boles hasn't done a thing yet. I haven't fed her since she's been down. Do you think I should?"

"I wouldn't. What color is Myrtle?"

"Blue, unfortunately. What did you expect?"

"Blue ones don't bring much on the market these days."

"Oh, I nearly forgot - my Mrs. Kimball just arrived from out west."

"I'm going to put my pigeon in my pocket and come right over. I don't know where you get all of them. Is she a girl?"

"My dear, no, but she is quite lovely."

Mrs. St. John hung up the receiver, shoved her pigeon into her pocketbook and made a dash down the road. Had she continued to hold the receiver she would have heard two quite distinct and shocked gasps.

"Who is there?" one of the gasps found breath to inquire.

"Mrs. Noosie, is that you? This is Mrs. Prye."

"I ask you now? I absolutely ask you? Did you ever hear such a shocking and brazen conversation in all your born days? Who were they, do you know?"

"One of them was Mrs. St. John. Not the one that called, but the one that answered."

"Who?"

"St. John. You know, the woman with all those African violets in the house. She lives just down the road from here."

"Well, I never! Jessie, of all people! And at her age too. Why she must be

fifty-four, if she's a day, and quadruplets at that. I'm speechless. Now Myrtle - -! I'm not a bit disappointed in her. Seven she has already with the youngest sixteen. But Jessie! That poor old maid. To look at her one would think butter wouldn't melt in her mouth. It comes to my mind now that I saw her not more than a month ago . . . and now quadruplets! Honestly, I'm speechless."

"Well, I am shocked and speechless too. Four! Truth will out. Who was the other woman on the phone?"

"Meeker. You know. That big woman that lives next to Jessie. Two of a kind, if you ask me. Who was the Mrs. Boles that was also expecting? Do you know?"

"Boles? Don't know any Boles. My word! You don't suppose they meant old lady Knowles. Why, I know that poor old soul has been married for thirty years. Imagine. After all these years."

The conversation was punctuated at this time by another click on the line.

"This is an emergency. Get off the line."

"Mrs. Knowles, is that you?"

"What's-it-to-you? Get off the line."

"My dear, we have just heard the news. Congratulations! To think after all the time you have been married."

"Is it against the law to stay married for thirty years? Get off the line."

"My dear. Of course not. We mean . . ."

"What? Who?"

"Not who. What. The baby, we mean."

"Who's baby?"

"Your baby. My dear, we just heard. I think it's wonderful. To think after all these years . . ."

But Mrs. Knowles did not hear the rest of the conversation. She replaced the receiver with an unconscious movement and sat in stunned silence.

"Poor dear", said Mrs. Noosie. "I'll bet she was disappointed because we found out."

"I shouldn't wonder. Say, - who was it they said they hadn't fed?"

"I don't recall. Let me think. It couldn't have been Jessie or Myrtle, and we just talked to Mrs. Knowles, so she should be able to feed herself. My word. You don't think there are more of them?"

"Wasn't there something about a woman arriving from out west? A Mrs. Kimball or Trimble, or something?"

"She did mention it, now that you remind me. What ever do you suppose?"

"Wasn't there something about her not being a girl? Let me think." There followed a full minute while Mrs. Prye "thought". Mrs. Noosie was doing a bit of thinking herself at the same time. "My dear, you don't suppose . . .?"

"A baby farm! Of course! We should have seen it before."

"My dear, I'm speechless, - absolutely and positively! But of course it must be. Didn't they say something about the 'market'? That sounds to me like they were planning on selling them. What do you think?"

"Think! I think it's your duty to notify the police."

"Me? But then we don't know for sure. We have no definite proof."

"Then let's find out. Hang up while I call her. Then you listen in."

Both women replaced the receivers, then Mrs. Noosie removed her own almost immediately and dialed "O" for the operator.

"Number Please."

"763W14. On this line."

"Hang up while I ring."

Mrs. Noosie did and waited while she heard the one long ring and four short ones. As soon as she heard that they were not being repeated she lifted the receiver and heard the "click" of Mrs. Prye doing likewise.

"Hello."

"Mrs. Meeker? I understand that your Mrs. Kimball has arrived. Is she about to have a baby?"

"Goodness! Not for a while . . . The house is over-run now. Who is this?"

There was no reply to this request as both the Noosie and Prye women had replaced their receivers with complete knowledge and satisfaction. Two seconds later the number of Mrs. Noosie was being rung. The party at the other end of the line was Mrs. Prye.

"Well! Now are you satisfied?"

"I'm speechless. Never in all my born days have I ever heard of any one so brazen. And to think we have been neighbors for years and years and we never knew."

"It's your duty to call the police."

"Why me?"

"Go on. I'll help you and back you up."

Several seconds later there was a phone ringing in the county police headquarters. The desk sergeant answered and was rewarded with a flood of female

voices, but after several minutes he arrived at the "meat" of the topic and, by piecing together a word here and there, came to the conclusion that a woman by the name of Meeker on Valley Road was running a baby farm. "Are you sure?" he inquired.

"Of course we're sure," came back the answer in duplicate form.

"How sure? How do you know?"

"The brazen thing just admitted it to us."

One half hour later, Detective-Sergeant Hooker, dressed in his very best civilian suit, was knocking upon the Meeker door.

"I have come to see the pigeons and the babies."

"Babies? ? Ah! You are a member, I imagine. Well I have dozens of plants . . . just babies, of course, but we have only one pigeon - Mrs. St. John's. We were just reading it. To which one do you belong?"

"Reading it?"

"Of course. What did you think we were doing? Eating it? You sound like some one from the Animal Rescue League. But come in. Come in. What did you say your name was? Now, which will it be first? The pigeon or the violets? Mrs. St. John here is a fellow enthusiast."

Detective-sergeant Hooker acknowledged the one-sided introduction and requested that he be shown the violets first. Fifteen minutes later he took his leave, red-faced and with a box containing the complete My Lady Series, the three "girls", Mammoth Blue, Rosalie and five "babies".

All of which boils down to the fact that there are still several people not yet initiated into the fine art of collecting, raising and discussing Saint-paulias.

(Author's comment: -- ~~Any similarity~~ between this conversation and any of your own is strictly your own fault.)

#### AFRICAN VIOLET FLOWER PINS

Ceramics in all colors. \$1.50 prepaid.

MRS. LILLIE KUEHN

4026 Garden Ave.

Merchantsville 11, N. J.



## NEW FAVORITES

Quixie Nichols, Tenn.

Two newcomers to the Neptune family are Double Neptune and Lavender Neptune. Both have the same dark, olive green foliage touched with wine underneath. Lavender Neptune has a large bloom of orchid or rose bi-color. Double Neptune, to me, is the prettiest of all doubles. Its blossom is more dark blue than purple.

Though not the newest of the new varieties in the dark foliage type plants, Blue Warrior stands out as the prettiest, with its dark, glossy, narrow leaves and its unusual shade of large, rounded, blue flower.

My favorite of the bi-colors is Gypsy Crown. It is the darkest of all, a reddish purple bi-color, with the two top petals being quite dark. I also like the new Gorgeous Bi-Color, very light in color with two darker top petals, a dark center and unusual dark tips on the three lower petals. The flower is large and round.

Of the duPonts introduced last Fall by Mr. Good, #4 creates more excitement among visitors to my greenhouse than any other violet unless it is Red Beauty. Blue duPont #4 has heavy, round, quilted foliage

with an attractive large bloom of a pale shade of blue. The blossoms are carried well above the foliage on sturdy stems, a truly regal plant.

Among the new girls I especially like are My Lady Sharon and Sailor Girl #1. My Lady Sharon is more attractive than Blue Girl and is a prolific bloomer. Sailor Girl #1 has lovely foliage and a large bloom a lighter shade than Tinari's Blue Eyes.

For Miniature lovers, a new addition to your collection is Brown's Pet, a tiny Blue Girl with deeply notched leaves and dark blossoms. Truly a miniature novelty!

Mauve Lace is not as compact as Old Lace and it makes a very nice shaped plant. The flower is cupped slightly and is the nearest lavender shade I have seen in a saintpaulia.

Fantasy is a lovely plant, new and really different. With Blue Bird type foliage, its blossoms have an orchid-pink background, rayed, splotted and streaked with purple. Two other African violets with variegated type flowers are Red Moire and Blue Moire. Blue Moire is dark blue in color with darker lines running down each petal, making the bloom have the appearance of moire cloth. Red Moire is similar except the color is red. Both are much admired.

Red Beauty is the one red everyone sees and likes. It is the reddest red I have. Rather a bi-color with the darker red of the two top petals shading down into the center of the bloom and into the three lower petals. The foliage is large and a light green color. Rosita is Red Beauty in a darker shade and is a prolific bloomer.

Some of the other new varieties we will all be wanting and getting soon, I hope, are Kay's Quilted with lovely foliage and a large, light blue bloom; White Girl, just what its name implies, white blooms on girl foliage; and the new Fringettes in six lovely shades. Then there is the new Marmarata that stole the show in Atlanta. It has spooned duPont type foliage, wine red on the backs of leaves, foliage very large and unusual, with a blue duPont bloom.

### CREeping AFRICAN VIOLET

S. grotel for hanging baskets and totem poles. First offering for summer delivery \$2.50 small plant.

MRS. HARVEY COX  
274 Euclid Ave.  
Long Beach, Calif.

# PLANTING BY THE MOON

Ada Muir, Canada

Noticing, in a previous article relative to this subject in Volume 2 No. 4, that the position of the Moon is given as it is in the Constellations and not as stated in the Signs of the Zodiac, I paid more attention to the patent medicine almanac for 1950 which was recently placed in my letter box. There I find that the position of the Sun is correctly given in its Sign of the Zodiac, but the position of the Moon is in the Constellations although such is not stated, and as a matter of fact, at the head of the column of Moon's places, it says "Zodiac Signs" which is incorrect.

A New Moon occurs only when Sun and Moon are in exactly the same degree in the same Sign, yet, according to this almanac, at the time of each New Moon during the year, the Sun is in the Zodiacal Sign, while the Moon is lagging thirty degrees behind in the Constellation preceding the Sign, which is an impossibility. Each Sign of the Zodiac occupies thirty degrees and the moon varies its rate of travel from eleven to fifteen degrees each day, yet in this almanac it frequently remains in one Sign for three days - star gazing probably - then skips through another Sign in one day.

If we are going to prove our point that some days are better than others for gardening operations, we must necessarily have the correct position of the moon. In this almanac, we are informed that the Moon is in the Sign Taurus during the last three days of this year and the first three of January. Taurus loves the festive board, so it is probably having a good time during the holiday season; but the Moon is actually in Taurus on December 29th and 30th, enters Gemini on the 31st and passes into Cancer on January 3rd.

So if we wish to know the best dates for sowing seeds, setting leaves, dividing plants, etc. we must set aside our patent medicine almanac and refer to our Ephemeris of planets' places. All constructive work, sowing seeds, setting leaves, dividing plants and even buying or selling them, should be done during the period from the New to the Full Moon for best results. If for any reason our plants require spraying, that is best done during the week preceding the New Moon.

All almanacs will give the phases of the Moon correctly, but we also want to know the most favorable months and days, taking into full consideration the nature of the plant. The Signs of the Zodiac are divided according to the different elements to which they are said to belong, fire,

earth, air or water, and the Sun is said to take about 30 days in passing through each of these signs. As a matter of fact, the Sun does not move, but it is the motion of our earth round the Sun which reflects the influence of these Zodiacal Signs.

As the African violet is a moisture loving plant, we give first choice to those periods when the Sun and Moon are in Water Signs. The Sun periods are from February 19th to March 20th, from June 21st to July 22nd, and from October 23rd to November 22nd each year. From these periods, we must choose those days when the Moon is in Water Signs and advancing in light, that is, from the New to the Full Moon and these days change each year. The best days during these periods in 1950 are February 27th, 28th, June 25th, 26th, July 22nd, 23rd and November 10th, 17th, 18th.

Our next best days are when the Moon is passing through Earth and Water Signs during the other Sun periods and still from the New to the Full. These days are January 21, 22, 26, 27, 31; February 1, 17, 18, 22, 23; March 21, 22, 26, 27, 31; April 1, 18, 19, 23, 24, 27, 28; May 1, 20, 21, 24, 25, 26, 29, 30; June 16, 17, 21, 22; July 18, 19, 23, 24, 27, 28; August 14, 15, 19, 20, 23, 24; September 15, 16, 19, 20, 24, 25; October 12, 13, 16, 17, 21, 22; November 13, 14, 17, 18, 22, 23; December 14, 15, 19, 20.

The Sign Libra is said to confer beauty in foliage and bloom, so these dates are given so that they may be tested and are April 2, 29, 30; May 27, 28; June 23, 24; July 20, 21; August 16, 17; September 13, 15; October 11.

You might get seeds to germinate and leaves to root on other dates than those given, but for best results, choose those dates that are in harmony with the work in hand, for there is a correct time for everything.

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CLIP THIS

# QUARANTINE REGULATIONS OF THE UNITED STATES AND CANADA

Inez Kelley, Michigan

Since Canadian members of the African Violet Society might wish to exchange leaves with members in the United States, I should like to pass on information regarding quarantine regulations.

According to information furnished by the Department of Agriculture, Plant Inspection, of Windsor, Ontario, quarantine regulations prohibit the import or export of all "Nursery Stock" without a permit. "Nursery Stock" includes plants or parts of plants. African violet leaves, although for hobby purposes only, are classified under the general term "Nursery Stock" of the Destructive Insect and Pest Act. Therefore, Canadian members desiring leaves from the United States should apply in advance to the Chief, Division of Plant Protection, Science Service, Department of Agriculture, Ottawa, Ontario, for a permit to cover each importation of such leaves. The application for a permit shall state:

- (a) Number of leaves
- (b) Kind and variety
- (c) Value
- (d) Name and address of importer
- (e) Name and address of shipper
- (f) Point of destination, if other than importer's address
- (g) How shipment is to be made, i. e., first-class mail, parcel post, express or freight

If no prohibitive plants are included in the application, a numbered permit will be issued and mailed to applicant. No charge is made for such permit, which will be accompanied by special mailing labels if shipment is to be made by first-class mail or parcel post. The importer will then send

his order, quoting the permit number, and enclosing mailing labels if issued. The permit is to be retained by the importer until notice is received from the nearest customs office that shipment has arrived. The permit will then be surrendered to the customs office along with other clearance papers.

Information contained in the following paragraphs comes from the U. S. Dept. of Agriculture, Bureau of Entomology and Plant Quarantine, Customs House, Detroit, Mich.

Since the leaves are for propagation, their importation from Canada is subject to the provisions of Nursery Stock, Plants and Seed Quarantine No. 37. Permits may be obtained by making application to the Import and Permit Section, Bureau of Entomology and Plant Quarantine, 209 River St., Hoboken, N. J. A certificate of Examination and Origin from the Canadian Department of Agriculture should be obtained from the shipper before leaves are shipped from Canada.

Shipment of plants from the United States to Canada is subject to regulations issued by the Department of Agriculture, Science Service, Division of Plant Protection, Ottawa, Ontario.

Members desiring export certificates for shipment of Saintpaulia leaves to Canada can obtain same after inspection of the leaves by a local office of the U. S. Dept. of Agriculture, Bureau of Entomology and Plant Quarantine. Certificates issued by inspectors of local offices of the State Department of Agriculture will also satisfy the requirement of the Canadian Department of Agriculture.

## FANTASTIC GARDENS

### Specializing in Tropical Shade Plants

Offering other plants in the African Violet family (Gesneriaceae) including: *Episcias*, *Naegelias*, *Achimenes*, *Trichosporum* and *Gesneria lindenii*.

Also *Bertolonia marmorata* - beautiful leaf, dwarf foliage plant shaped like an African violet but not related.

Special offer - 4 kinds of *Episcias* and 1 *Bertolonia* for \$5.50 postpaid.

**R. G. WILSON**  
ROUTE 2, BOX 594, MIAMI, FLA.



## "WHAT'S IN A NAME"

Boyce M. Edcous

The March, 1950, issue of African Violet Magazine, page 33, carried a brief, interesting article by Daisy Jones, Tennessee, under the caption "What's In A Name." The heart of this article is an expression of the hope that . . . "originators of new varieties of African violets will stick to color" . . . in naming them. Then, too, she expressed the hope that . . . "the Committee on Registration will encourage growers of new varieties to name their African violets so that the prospective purchaser will have a clue to the color of their purchase."

I do not know now how all members of the Committee on Registration would vote or decide on this matter, but I know how I feel about it.

If there were only a comparatively few varieties, as was the case only a short time ago, then I would be all for designating the color of the bloom of all varieties in the wording of their respective names. But that time is past because both amateur and commercial hybridists are now bringing new and different varieties into being by the scores, and this will keep up for a long time to come. The magic, or I should say the natural consequences, of crossing, back crossing and selling many of the new seedlings will produce still further new and novel varieties.

Even now, the beauty and attractiveness of foliage and form of growth of many of the new varieties—the new hybrids—are of co-equal importance with the beauty and attractiveness of their bloom color. For example: I have before me on the desk, as I write this, one of the new 'Girl' seedlings. Besides having really excellent and prolific bloom of a true light blue tone—not even a hint of lavender—the form of its growth is almost all that could be desired; and the color of its foliage is described by one of our feminine neighbors who is an African violet enthusiast as, "Out-of-this-world." It has a very dark green color, almost a black-green, with large chartreuse-white spots at the axil of the leaves, inherited no doubt, from its Blue Girl grandparent.

Now, who would wish to attach the word blue, by way of describing it, to the name that will sooner or later be given to this splendid new creation? The blue of its bloom is only one of its charming characteristics. Would not some name of a single word, perhaps, such as Aristocrat — Glorious — Pinnacle — or Innovation more nearly reflect its many fine characteristics?

No, let us not thrust a color designation into the names of these new creations in the realm of African violetdom. I hope that you will read what our President, Mrs. Arthur Radtke, says about this in her Message at the opening of this issue of the Magazine. Yes, there is much—or at least there should be much in a Name.



**WHILE** traveling through Rochester plan to stop and see our **AFRICAN VIOLETS**. We have over 50 varieties. See them in **SYCO BOWL** pottery, green, red, white and blue colors. Open evenings and Sunday.

Take Culver Road, through Sea Breeze two miles to Vosburg Road.

**JOHN R. GENT**

595 Vosburg Road Webster, N. Y.  
— — — We do not ship! — — —

"New listings out in July, containing Dixie Supreme, Pastel Girl (both new) and many other new varieties. Send stamped envelope for same."

**STARR DAHLIA GARDENS**

869 Confederate Ave., S.E.  
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### \* AFRICAN VIOLET POTS \*

50-2 1/4" standard red pots.  
30-3" standard red pots.  
20-4" squatty azalea pots.  
100 pot labels \$5.00 for all.

**MEARS GARDEN SALES**

R. 3, Box 89, Anderson, Ind.

### FREE SAMPLE

**PLANTSMITHS**

**SPOONIT**

"JUST THE THING" for African violets.

A trial will cost you but one penny - for a postal card. So send today for your sample, and join the fast-growing **SPOONIT CLUB**.

**PLANTSMITH**

Box 818A

Palo Alto Calif.



(By action of the Board of Directors, new members joining the Homing Pigeon after July 31, 1949, must be members of the National Society.)

### THE HOMING PIGEON SPEAKS

"Greetings, my friend, I bring to you  
A word of cheer, a hint or two.  
When these letters you have perused,  
Add a line or two of your own news.

"Three days is the length of my stay,  
Then I again must be on my way,  
To another home, perhaps state—  
So I must fly, or I'll be late.

"Slip me into an envelope strong  
With Postage proper to carry me along.  
Address to the next member along the way,  
With a return address, in case I stray.

"If my flight you care to guard,  
Be sure you mail that courtesy card.  
This is your Director's sincere wish,  
In fact, of this she does insist.

"Farewell, dear friend, I must be off;  
But let me leave you with this thought—  
Just treat me as you would a friend  
Then I'll be 'round to call again."

—Inez Kelley, Mich.

And now that the Homing Pigeon has  
spoken—let's get down to business.

### IS CITY WATER THAT IS TREATED WITH CHEMICALS HARMFUL TO THE SAINTPAULIA?

Several members of Unit 23 report that city water seems to be injurious to their plants. They find that rain water or pure water makes the plants respond much better. Mrs. Jack Rhodes, Lowellville, Ohio, Director of this Unit, says, "Water that



VIOLET BERRY

Homing Pigeon

News Editor

has been softened is not good for plants. If city water sits for 24 hours, it is supposed to lose all the harmful gases that it may contain."

"Have you ever tried water from the refrigerator for rooting leaves? It is almost pure distilled water. If a person has hard water or water with harmful chemicals in it, he can do no better than to use the water from defrosting the compartment."

—Robert Campbell, Ga., Unit 30.

### HAVING TROUBLE WITH YOUR WOODEN STAKES ROTTING?

"One night when I should have been sleeping, I got to wondering if I could think up any way to protect plant labels from disintegrating in the soil. I knew telegraph poles have a coating of creosote which I could not use in flower pots. Finally I thought of paraffine. I dipped the pointed ends as much as necessary into the paraffine when it is just starting to cool—it stays on better then. I use a crayon pencil to write the name." — Mrs. H. S. Gregory, N. Y., Unit 74.

### ARE WE OVERSUSPICIOUS OF PLANT ILLS, AND ARE SAINTPAULIAS DELICATE THINGS THAT NEED TO BE BABIED? FOR EXAMPLE:

"A member of a violet club received back issues of the African Violet Magazine. She started reading them. One day she was quite sure her plants had thrips. She read on—next day she was sure she had nematodes. She called me, and had broken up, de-rooted and deleafed many choice plants. I assured her that I was sure she had no nematodes. She could find no lumps in the root systems. She actually had only springtails which are quickly dispersed with by putting 1 teaspoon ammonia per quart of water when watering."—Mrs. F. F. Bourne, Ohio, Unit 91.

"One of my Pigeon members who likes to visit growers, recently paid a visit to a greenhouse, where she watched them transplanting rooted leaves. She was amazed at the careless way they were handled. They were grabbed up by the handfuls and crammed into pots. One worker upset a box full of leaves on the floor and these were scooped up unceremoniously and thrown on the table. The work was all done so fast that it was a miracle the leaves weren't all broken. Yet the larger plants displayed at this place were beautiful and the picture of health. They have two very

large greenhouses filled with nothing but saintpaulias as well as five others for other kinds of plants. I'm convinced that I baby my plants far too much. They'd probably do better if I kicked them around a little!"—Eleanor May, Pa., Unit 30.

"I had 2 or 3 saintpaulias last spring that were not doing well, so I planted them out under a tree where I had other plants. I left them there through all the spring rains. When the hot weather came, I potted them. Now I know it doesn't hurt them, so outside they will go on warm spring days to get a good washing off."—Mrs. J. C. Keithly, Mo., Unit 75.

#### HERE ARE SOME IDEAS ON SOIL AND FERTILIZERS:

"Many who grow violets keep the outer leaves broken back, leaving one row under the bloom stalks, believing it gives strength to bloom. We could be wrong! Try a teaspoon of bone meal in the bottom of your 4 inch pots. It is slow and long available. I've had my best bloom from this one trick. My Pink Beauty has never been completely out of bloom in four years, and it is in the same pot and soil with the bonemeal in it all that time."—Louise Smouse, Tenn., Unit 53.

"It is vitally important to know whether soil is properly balanced or not. Last spring, I mixed a basic soil of 1/3 loam, well rotted manure, sand and leaf mold, to which I added one quart of wood ashes. Many of my plants have thrived, others die, others have stood still. Through the summer, every thing I planted in that mixture died. The leaves would stay nice and green for as long as a week but from root half way up the stem the plant dried up just as fast as it could after being put into this soil. I lost perhaps 50 plants before I woke up to the fact that it could possibly be my soil. All the time I was blaming the extreme hot weather and humidity. Finally I had this soil tested only to find it had too much potash in it, it was burning the roots up. The man who did the testing said, 'you never know how much potash wood ashes contain, as it depends upon the kind of wood it is and what elements went into its growth! What a lesson I have learned!'—Eleanor May, Pa., Unit 30.

"Fertilizer should always be applied to the soil surface, even if plants are watered from the bottom—as fertilizer nutrients do not rise thru the soil with the capillary moisture in correct balance for plants. Occasionally watering from the soil surface is also needed to wash back down into the soil the chemicals which are left behind on the soil surface as water evaporates from it. As the plant gets more light in spring, it will need additional fertilizer to balance the increase in sun made foods in the leaf. Although you want abundance of sun foods in the leaf to encourage continuous flower—leaves will tend to grow light green unless enough fertilizer is supplied. This can first be seen in the lower leaves. The safest way to apply plant food is in liquid form. Mix 1 teaspoon complete dry



**GLADYS CANNER**

**Homing Pigeon**

**Membership Manager**

If you wish to join a group, or if you wish to withdraw from one, please communicate with Mrs. Canner.

fertilizer to one quart of water. Apply to surface with funnel so that it does not touch leaves."—Esther Schadewald, Pa., Unit 30.

"A member of my unit suggests that we place a plant in a saucer on top of a tablespoon of hydrated lime and water it, from the bottom, of course, with boiling water about three or four times as the plants need it. She suggests that we try it out on a plant that we don't think too much of at first rather than a prize specimen. She says it works wonders, and I'm not one to doubt her word, for she always gives good advice, and she has the 'most delicious' plants you have ever seen."—Robert Campbell, Ga., Unit 30.

"I have quite a few 'Log Cabin' maple syrup vase-shaped bottles. I keep them filled with water and one 'Plant Tab' in each, near my plants, ready to use when needed. The moisture from these and three large flower vases filled with water provides humidity and saves steps and time when I want to water."—May Gibson, Pa., Unit 67.

#### WHAT CAUSES ROT?

'Root rot is what most people call crown rot, why I don't know, because it actually is root rot. The roots die, turn brown and rot away, then the rot starts up the center heart of the main stalk. As it gradually goes upward and reaches the leaves they become limp and droop, because they can get no more nourishment. If a plant is taken up and all the rot trimmed off, it can be rooted again, otherwise the entire plant gradually becomes limp and dies. This type of rot works very slowly. Nematodes may be one of the causes of such rot, but I'm sure all such rot is not caused by nematodes."—Mary Margaret Odom, Iowa, Unit 40.

"My trouble recently has been losing greenhouse plants (grown in reliable greenhouses). The healthiest looking plants start by outer leaves becoming limp as with root rot. When plant was immediately taken from pot and the soil removed completely from plant, I found a dry type rot of the large main root. Now these plants, when cut back, after defeaving toward center to 1/4 in. beyond all discoloration of crown, still could not be saved, and all leaves tried for rooting rotted immediately. Could the constant use of sodium selenate which is

## NEW AFRICAN VIOLETS

Write for Price List  
No shipping. Open week-days and  
Sundays till dark.

*Behnke*  
NURSERIES

Wash.-Balto. Blvd., Beltsville, Md.  
Just 5 miles north of University of  
Md. directly on U. S. Route No. 1.  
Phone TOWer 6284

BETTER

## AFRICAN VIOLETS



or your money back!

Just mix Activo (organic activator) with soil,  
and when watering, add MANNA (tonic and  
plant food).

Amazingly good for ANY PLANT—indoor or  
outdoor garden. Results assured! Whole  
year's feeding costs only a few cents.  
No. 2 size Activo, \$1.00 postpaid—enough  
for more than 100 feedings. MG size  
MANNA, \$1.00 p'pd makes 100 gallons quick  
acting plant food. (Your choice, pellets or  
powder). Both MANNA and Activo together,  
\$1.95, p'pd.

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### AFRICAN VIOLET LEAVES—

Many good varieties. List upon request.  
Orders carefully handled and safe delivery  
guaranteed.

MRS. LOUISE TRIBBLE  
Fort Payne, Alabama

### African Violet Seeds

Mixed seed from many crosses of many  
varieties. Package of approx. 400 seeds  
\$1.00. Planting instructions with seed.  
Special and Extra Special crosses \$2.00 and  
\$3.00 a package. If interested send stamp  
for list.

FRIENDLY GARDENS  
New Bedford, Pa.

### SPECIALIZING IN AFRICAN VIOLETS

Send For Free Price List  
TONKAIDALE GREENHOUSE  
Rt. 3 Box 233 Hopkins, Minn.

used in the greenhouse make the plants  
weak and more susceptible to rots while  
immunizing against mite and pests?"—Mrs.  
F. F. Bourne, Ohio, Unit 91.

### WOULD A CLASSIFIED INDEX PUT OUT ONCE A YEAR BY VIOLET MAGAZINE BE OF VALUE TO US?

"Did you ever want to refer to an article  
which you have read in the Society's mag-  
azine and you hunt and hunt and get  
madder by the minute because you are in  
a hurry and can't find that particular item.  
I wonder why the African Violet Mag-  
azine does not have an index? (Ed. Note:  
We now have an index.) Well, I have that  
problem licked now, although it has taken  
about two weeks of my evenings. I bought  
a loose-leaf ledger and listed every article  
in the magazine up to date. When I get  
this all together, I will make up an index  
with the number of the page and issue in  
which that particular item is located. In  
the Index, alphabetically, will be listed  
combatants for Insects and Diseases, Fer-  
tilizers, Propagation, Soils, containers, his-  
tory, exposure, watering, etc."—Inez Kel-  
ley, Mich., Unit 70.

### HOW OLD SHOULD A PLANT BE BEFORE IT WILL BLOOM?

"It is not true to my knowledge that a  
Plant must be a year old to bloom. I don't  
know whether any of you have had this  
experience, but I have two plants (baby  
plants) the little leaves are not a half inch  
high, the mother leaf has not as yet been  
removed and one plant has two blossoms  
and the other has one blossom and a bud  
ready to bloom. There is no way to my  
knowledge of telling the age of a plant  
when purchased. I have a Blue Boy over  
fifteen years old that blooms profusely and  
looks as young and fresh as the others."—  
Mrs. L. G. Aldridge, N. Y., Unit 94.

There are many more items of interest  
that I have on hand which I would like to  
use, but, since we are given only so much  
space for our column—the rest will have  
to wait until the next time. I do hope you  
will comment and discuss some of these  
things in your Units, "I'll be listenin'."

Sincerely,

Violet Berry, Pigeon Ed.

### Plant Magic VITAMIN B<sup>1</sup> Tablets

This is the same plant vitamin product so  
popular for so many years—that gave the  
amazing results in California and elsewhere  
you read about. Recommended especially for  
African violets. Handy tablets—each makes  
1 to 5 gallons watering solution. Special  
offer: Two 100-tab. bottles for only \$1.00  
postpaid.

PLANT MAGIC DIVISION  
BENSON-MACLEAN, Bridgeton 67, Ind.

# THE QUESTION BOX

Lauretta L. Littig

3016 Jefferson Ave., Davenport, Iowa



Miss Littig

I was pleased to receive so many nice letters. Keep your questions coming in.

These Readers ask help with their problems. When replying, please mention the name and state of the person who asked the question.

When asking questions, please give your state after your name.

I have no trouble in separating my violets except where I have a double crown plant that is Siamese in nature. When the plant is torn apart, I feel the raw place should have some special attention, as it has caused me some loss of good plants. What should I do?

—Miss Adelaide Beck (Tenn.)

What is the difference between Amazons and Supremes? What causes young plants to sometimes have pale green almost yellow-center leaves? As they get larger they turn to darker green.

—Mrs. Glen Spangenberg, (Mich.)

Is there such a thing as a Persian Violet? A friend has a violet with dark purple flowers, very thick dark green quilted leaves, dark wine color beneath which she calls "Persian Violet."

—Mrs. Peter Sale (Ill.)

Please tell me why my African Violets won't bloom although they have beautiful foliage. My friends start plants from my leaves, have them full of blooms, and give them no better care.

—Mrs. G. A. Childs, (W. Va.)

My plants are healthy and have lots of blossoms, but they are never as large as the flowers on my friends' plants. Why?

—Miss E. Carlson, (Ill.)

I have pollinated a number of my plants and all the crosses took except the ones made with White Lady. Why is this?—I would like to know where I could get a "Blue Chard" plant or leaf.

—Richard D. White, (Mass.)

What causes small brown spots to come on under side of the leaves? What makes some of my deep green leaves with dark red underneath lose their color?

—Mrs. Daniel MacArthur, (Mich.)

My problem is that the buds on my violets dry up when about 1/8 inch long or less. I fertilize with Hyponex and Hy-gro, ventilate and spray with water every two weeks. I would appreciate help.

—Mrs. F. D. Bayley, (Mass.)

My trouble is, the outside leaves of some of my violets go soft and limp. I use plastic, clay and china pots. What causes this?

—Mrs. Floyd E. Davis, (N. Y.)

My plants look healthy but the outside leaves develop a brown spot which is very small at first then gets larger until the leaf wilts. The spot is soft like jelly. Some leaves start to dry up on the ends until the whole leaf dries up. Another thing, what makes the leaves in the crown turn yellow?

—Mrs. H. F. Harder, (Kans.)

## HOUSEPLANTS

We have many new and unusual varieties of Saintpaulias priced from 75¢ to \$2.25.

Introducing Marys Orchid and Dixie Rose nt \$2.25 each F.O.B.

We have fertilizers, sprays, soil, soil conditioners for your own soil.

Vermiculite 2 bu. bag \$2.15 F.O.B.

Sodium Selenite 100 grms \$1.50

Stim Root with fungicide makes this a top product. 2 oz. \$1.00

Super Phosphate 20% 5 lb. 50¢ F.O.B.

Ask for Spring list if not on our mailing list. If you wish our fall sheet listing many new plants send self addressed and stamped envelope.

YOARS HOUSEPLANT NURSERY

R. 1, Bunker Hill, Indiana



## POTS FOR AFRICAN VIOLETS

4" "Squatty" Clay Flower Pots, dark red in color and with excellent porosity, are ideal for AFRICAN VIOLETS. Has specially treated edges to help prevent sloughing off of leaves. Used by florists for growing violets, and recommended as one of the best for good results. Shipped prepaid parcel post.

4 for \$1.00 10 for \$2.00  
25¢ additional postage west of the Rockies

CERAMO COMPANY

Box 84-A

Jackson, Missouri



## CLUB NEWS

Maxine Wangberg, Club Editor  
1920 W. 3rd St.  
Perry, Iowa

### DAYTON SHOW

The Dayton African Violet Society held its first show at the Dayton Art Institute with over 3,000 persons in attendance.

The show was attractively staged on long tables arranged along the walls and covered in pale yellow. An outstanding feature was the educational exhibit arranged by Mrs. O. P. Lyons. Here were shown seeds and seedlings, as well as leaves and plants in all stages of growth, and all manner of growing media. Copies of the African Violet Magazine were on display, as well as other literature on African violet culture.

There were classes for specimens divided into color groups, a class for arrangements and a class for corsages using violets with other foliage. Mr. and Mrs. Arthur Radtke were the judges. Sweepstakes award was won by Mrs. W. J. Wampler. Several nearby growers had beautiful displays, which added very much to the effectiveness of the show.

Mrs. H. J. Sweeny was Show Chairman.

### MURFREESBORO CLUB

The Murfreesboro African Violet Club, which was organized in 1948, now has a membership of 13. Meetings are held once a month, a luncheon and well prepared program being enjoyed each time.

Newly elected officers for 1950 are:

President, Mrs. H. C. Moore. III.

Vice-Pres., Mrs. Herbert Young.

Sec. & Treas., Mrs. R. C. Patrick.

This club held its first show last fall, with an attendance of 121. Guests were served cookies and Russian tea.

### WOODMONT AFRICAN VIOLET CLUB

The Woodmont African Violet Club of Nashville, Tennessee, was organized on June 9, 1949, at the home of Mrs. T. M. Smoot.

The following officers were elected:

President, Mrs. T. M. Smoot.

Vice-Pres., Mrs. Roy R. Rogers.

Corres. Secy., Mrs. M. G. Hubbard.

Rec. Secy., Miss Edwina Neathery.

Treasurer, Mrs. G. I. Sally.

### LEWISTON SOCIETY

At the January meeting of the African Violet Society of Lewiston, the following officers were re-elected for the coming year:

President, Mrs. Homer C. Foltz.

Vice-Pres., Mrs. Leslie Heck.

Secy. & Treas., Mrs. James Helmbold.

### OCALA, FLORIDA, CLUB

The present officers of the Ocala African Violet Club are:

President, Mrs. B. F. Shealy.

Vice-Pres., Mrs. John D. Williams.

Secretary, Mrs. Fred E. Landt, Sr.

Treasurer, Miss Agnes Dalzell.

### NEW SAINTPAULIA GROUP FORMED

A group of 17 Saintpaulia enthusiasts met recently in Bethlehem, Pa., and organized a "Violet Group," with the following officers:

President, Mrs. Charles O. Bott.

Vice-Pres., Mrs. Harold J. VanKeuren.

Secretary, Mrs. Morris Jones.

Treasurer, Mrs. Wayne R. Archerd.

This group has already been requested to have an exhibit in the Bethlehem Flower Show, which will be held in the armory on June 7 and 8, the exhibit to be in the garden class. Members of the group will be present to hand out saintpaulia literature, application blanks for membership in the National Society, and give requested information.

### SPENCER, IOWA, CLUB

The first meeting of the Spencer, Iowa, African Violet Club was held in November and the Club was formally organized in December, 1949. At that time the following officers were elected:

President, Mrs. E. P. Arnold.

Vice-Pres., Mrs. K. A. Camp.

Secy. & Treas., Mrs. G. L. Hurd.

The meetings consist of roll call with each member contributing an item of interest on saintpaulias, a program on some phase of culture with a discussion period after, and the business meeting.

The 13 members hold their meeting in the homes of members on the first Thursday of the month at 9:00 A. M. Plans are being made to have a display of African Violets this spring.

### WESTWOOD SOCIETY ORGANIZED

The Westwood African Violet Society of Dayton, Ohio, was organized in November, 1949. Meetings are held the third Tuesday of each month at the Hi-Grade Activity Center. At present there are 14 members.

The officers are:

President, Mrs. Clarence W. Long.

Vice-Pres., Mrs. Wilbur Owens.

Secy. & Treas., Mrs. L. M. Simontou.

Programs consist of talks on the different phases of African Violet culture.

### TULSA SOCIETY

The following officers have been elected for the newly organized African Violet Society of Tulsa, Oklahoma.

President, Mr. Roy W. Smith.

Vice-Pres., Mrs. Banks McDowell.

Rec. Secy., Mrs. C. S. Reves.

Treasurer, Mr. A. L. McFarland.

Corres. Secy., Mrs. Phil Cline.

The 65 enthusiastic members of this group meet on the third Tuesday of each month in the Club Room of the Public Service Company. Two door prizes are given at each meeting, a large African violet and a small one with the name of the plant starting with the first letter of the month.

An exhibit is being planned for the late spring, which should be of interest to the many violet lovers throughout Tulsa and the surrounding area.

## METROPOLITAN AFRICAN VIOLET SOCIETY

At its first meeting of the year the Metropolitan African Violet Society of Washington, D. C., and surrounding cities installed the following officers:

President, Mrs. William Husted.

Vice-Pres., Mrs. J. Raymond Hoy.

Treasurer, Mrs. W. W. LaMar.

Rec. Secy., Miss Ruth Washburn.

Corres. Secy., Mrs. W. S. Burbank.

The Society has changed its meeting time to the second Tuesday of each month.

## OMAHA SOCIETY

The newly elected officers of the African Violet Society of Omaha, Inc., are as follows:

President, Mrs. Maurice Malloy.

Vice-Pres., Mrs. Frances Pace.

Secretary, Mrs. T. E. Davis.

Treasurer, Mrs. R. H. Swingholm.

The club plans its 3rd Annual Show to be held in the Joslyn Memorial on March 25 and 26. Meetings are the second Tuesday at 1:00 P. M.

## FIRST SOCIETY IN CHICAGO

The first meeting of the African Violet Society of Chicago was held on January 12th at the home of Mrs. Mary Fowkes. The following officers were elected:

President, Mrs. Mary Fowkes.

Vice-Pres., Mrs. Charlotte Hansen.

2nd Vice-Pres., Mrs. Elsie Nelson.

Corres. Secy., Mrs. Alma F. Carlson.

Rec. Secy., Mrs. Dorothy Szontagh.

Treasurer, Mrs. Helen Prebis.

The limit of 24 members has already been reached by the club. Meetings are held on the first Thursday of the month.

## NEBRASKA SOCIETY

The Saintpaulia Society of Tecumseh was organized on November 10, 1949, and now has a membership of 16 active members and 2 honorary members. Meetings are held on the first Wednesday of each month. The officers are:

President, Mrs. William Shafer.

Vice-Pres., Mrs. Fay Gilbert.

Secretary, Mrs. Robert Gieser.

Treasurer, Mrs. Roy Broady.

An African violet display is being planned for this Spring.

## LONG BEACH SOCIETY

Mrs. C. H. Harris of the Los Angeles Saintpaulia Society installed officers for the Long Beach Saintpaulia Society at their January meeting. Officers are:

President, Mrs. Ethel Thalmeyer.

Vice-Pres., Miss May Symonds.

Treasurer, Mrs. Veryl Maxham.

Very interesting programs have been planned, and a saintpaulia show will be held in the late spring.

Among the projects for the coming year will be gifts of blooming plants for the Veterans of the Navy Hospital, a forum published each month with information, hints and experiences, and a plant sale at each meeting.

## ADMIRAL AFRICAN VIOLET SOCIETY OF AURORA, ILLINOIS

In August of 1949, a group of 8 women met at the home of Mrs. E. G. Magill to discuss the possibilities of organizing an African Violet Club. Interest ran so high that fundamental plans were made, and the date of September 23rd was set for the first meeting. At that time the following members were elected to office.

President, Mrs. M. W. Livingston.

Vice-Pres., Mrs. E. G. Magill.

Secy. & Treas., Mrs. Alfred Weingartner.

The Club meets in the homes on the fourth Friday of each month for a desert luncheon, which is followed by an interesting discussion or a paper given by one of the members. Following the November meeting, a tour of a local commercial grower was enjoyed by the group. Planned for the April meeting is a trip to De Witt, Iowa, for a talk by Mrs. W. H. Odom and to see her saintpaulia collection.

## DOWNERS GROVE SOCIETY

The Downers Grove African Violet Society of Downers Grove, Illinois, was organized on January 31, 1950, at the home of Mrs. S. C. Hurley. Officers elected for the coming year are:

President, Mrs. S. C. Hurley.

Vice-Pres., Mrs. Leo James.

Treasurer, Mrs. Carl W. Elmer.

Secretary, Mrs. G. P. McGraw.

The meetings are to be held once a month, in the homes of members, on the first Thursday of each month at 9:30 in the morning. Membership has been limited to 25 members.



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## MAKE MINE

## EGG SHELLS

## FOR WATERING!

Helen L. Burchell, Mich.

I keep three 1 pound glass coffee cans with screw tops filled all the time with egg shells. When a can is filled, I pour very warm water over the egg shells until the jar is full. Then I set it away until the water is milky, and it smells a little bad. . .

Then this water is poured off into a large coffee pot and is heated on the stove until it is warm enough for my plants to take up without damaging the roots. Then I water them from the bottom.

Bottom watering I believe is best for my African violets. I always water just enough so that the top half inch of soil is left dry . . . giving crown and stem rot no opportunity to get started.

It seems that using egg shell water for watering has made the leaves an almost black-green. The leaf stems and leaves are thick and heavy and the blossoms large. My plant of Hardee Blue has leaves 3 inches wide and 4 inches long on stems 3 inches in length. A fine sturdy plant!

If you like and use Vitamin B1 tablets, they may be added to the egg shell water and used at the same time.

## BELINDA ? ?

Before Christmas I had a new maid --- one who had to have every thing out of sight whether it was in the correct place or not. And one might add, one not schooled in the care of African violets, nor accustomed to seeing them planted in refrigerator dishes and growing in the kitchen.

After she left, I admired my immaculate kitchen until I found the floor wax and breakfast cereal side by side in the dish cabinet! And imagine my surprise when I discovered African violets growing in the refrigerator! My seedlings --- so carefully planted in vermiculite and kept covered and warm, had been well chilled for 3 or 4 hours. They seem to have suffered no ill effects. but I am watching them closely for a rare specimen. If I get one, I shall name it Belinda, for she was responsible.

Martha Browning, Tenn.

## HELPFUL POINTERS

Roswell H. Johnson, Calif.

In a recent Magazine, I note benefit was derived from using limestone pieces in the bottom of the pot. In many parts of the country, limestone is not readily available. I use ground shells mixed into my medium. The shells I use are either egg or mollusk shells.

We all have leaves broken off at the base of the blade, accidentally, and when the variety is worth the trouble, I cut away enough of the blade from the bottom to give a stable stalk to put to root. Be sure to have the cut parallel to the adjoining rib. The loss from damping is increased, but usually enough will survive to give enough salvage, better than if the whole blade was put in the soil. Loss depends on the variety as well as the culture.

Since leaves to be started are frequently available only one or two at a time, I like the core method in order to permit continuous growth without set-back.

In this method the thumb is used to hollow out a core in moist medium a little above the center of a three inch pot. This core is filled with mixed vermiculite and sand, half and half. The end of the petiole is centered in this core, medium is added, but the amount above the vermiculite mixture is quite thin. A secondary advantage to this method is that the uprising shoots meet less resistance.

A watering method that gives me best results is to use five cent plastic bowls. I water when needed, giving the plant as much water in the bowl as it will use in half an hour. The advantages are that the plant is never soggy from over-watering, and there is drainage induced to prevent the pot becoming rich in soil salts as shown by white encrustation.

I use liquid fertilizer from a nose drop bottle, one of the hydroponic type until growth is adequate, and then a potash fertilizer on the suspicion that it will stimulate flowering.

## VIOLET LOVERS ATTENTION

Why not be among the first to add the newest creation in African violets to your collection? From our observation, and from the enthusiastic expressions of some of the leading violet growers and magazine editors, who have seen them, we believe we have produced the "QUEEN" of all the African violets - "FISCHER'S FRINGETTE STRAIN".

The FRINGETTE STRAIN is a group of violets whose petals have a delightfully wavy appearance, with a decidedly fringed edge, set off by a bright yellow eye, which makes it a thing of real beauty. It is the result of a single violet crossed with our popular Double, and therefore retains many of the characteristics of the Double, among which are its longer lasting qualities. To those who like distinctive shades, FRINGETTE comes in beautiful shades of Light Blue and Dark Blue at \$1.50; Red Lavender and Blue Lavender at \$2.00; Mauvette Lavender and Pure White at \$2.50; or \$10.00 for one each of the set of six, which is a saving of \$2.00. All plants are out of 2 1/4" pots and are good, healthy plants.

The FRINGETTE STRAIN is produced by the originators of the famous FISCHER DOUBLE VIOLETS and the popular MY LADY SERIES. We ship to all parts of the country postage prepaid on orders of \$5.00, otherwise add ten cents per plant. No C.O.D. orders accepted. Send for our FREE descriptive folder and price-list which contains many other varieties, and information on how to grow African violets successfully in your own home.

  
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**Tinari's Amazon Blue Eyes**— A large edition of our popular Blue Eyes, a real Tinari favorite. One of the best amazon types to date, characteristic dark, glossy, foliage, gracefully cupped, with large beautiful light true blue flower, with pronounced yellow golden stamen. \$2.00 each.

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Pink Beauty  
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Plants 3" to 5" high, chosen from a stock of 50,000.

African violet accessories to insure a clean, healthy, violet collection during the hot summer months ahead.

**Optox Insecticide Spray**— To safe-guard your violets against cyclamen mite and mealy bug. 1 oz. size 60¢, 6 oz. size \$1.35. (Full directions).

Mist type sprayer to apply insecticide correctly, 1 pt. size \$1.25.

**Liqua Vita**— A highly concentrated LIQUID plant food, so simple and easy to use. just add to water, non acid forming, excellent for weekly feeding of African violets. 8 oz. 75¢.

**Hyponex Plant Food**— An economical, clean, odorless plant food, to promote good, vigorous growth and bloom, used weekly for best results. 7 oz. can 50¢. 1 lb. \$1.00 P.Pd.

**Tinari's Certified African Violet Soil**— This special brand of soil has been treated to control most nematodes, soil insects, root rots, wilts and weed seed, also harmful soil fungi, and eel worms so commonly found in soil. Sterilized and expertly blended for your immediate use. 3 lb. \$1.00, 5 lb. \$1.50. All accessories sent P.Pd.

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